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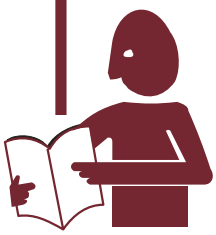
SUPPLEMENTAL SERVICE INSTRUCTIONS

WV-4HF
WV-4HFRW
WV-4HS
WV-4HSRW

ELECTRIC 4-BURNER HOTPLATE with VENTLESS HOOD SYSTEM



IMPORTANT: WELLS BLOOMFIELD, LLC PROPRIETARY INFORMATION. DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED. TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.

PRINTED IN UNITED STATES OF AMERICA

PRECAUTIONS AND GENERAL INFORMATION

WARNING: RISK OF INJURY

Installation procedures must be performed by a qualified technician with full knowledge of all applicable electrical and plumbing codes. Failure can result in personal injury and property damage.

WARNING: ELECTRIC SHOCK HAZARD

All servicing requiring access to non-insulated electrical components must be performed by a qualified technician.
Some procedures involve exposed live circuits. Use all due caution to avoid contact with live electric circuits. Failure to follow this warning can result in severe electrical shock.

CAUTION: RISK OF DAMAGE

DO NOT connect or energize this appliance until all installation instructions are read and followed. Damage to the appliance will result if these instructions are not followed.

This appliance is intended for use in commercial establishments only.

This appliance is intended to prepare food for human consumption. No other use is recommended or authorized by the manufacturer or its agents.

Operators of this appliance must be familiar with the appliance use, limitations and associated restrictions. Operating instructions must be read and understood by all persons using or installing this appliance.

Cleanliness of this appliance is essential to good sanitation. Read and follow all included cleaning instructions and schedules to ensure the safety of the food product.

Disconnect this appliance from electrical power before performing any maintenance or servicing.

DO NOT splash or pour water on, in or over any controls, control panel or wiring.

The technical content of this manual, including any wiring diagrams, schematics, parts breakdown illustrations and/or adjustment procedures, is intended for use by qualified technical personnel.

Any procedure which requires the use of tools must be performed by a qualified technician. All service to the fire suppression system must be performed by an authorized Ansul® agency.

This appliance is made in the USA. Unless otherwise noted, this appliance has American sizes on all hardware.

IMPORTANT INSTALLATION NOTE:

6” clearance is required from back and sides of the appliance to any combustible or non-combustible surface.

This installation requires a minimum ceiling height of 96" in order to maintain adequate airflow.

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SPECIFICATIONS

MODEL	DRAWER WARMER	VOLTS 60Hz	3ø AMPS			1ø AMPS	WATTS	DIMENSIONS
			L1	L2	L3			
WV-4HF	NO	208V	16	15	26	30	6,300	30-1/4" Wide (42-1/4" incl. spacers) 77-1/4" High 35-1/2" Deep
		240V	18	17	30	35	8,300	
WV-4HFRW WV-4HFRWT	YES	208V	19	15	30	34	7,000	
		240V	27	22	43	48	11,600	
WV-4HS	NO	208V	20	19	34	39	8,100	
		240V	23	22	39	45	10,700	
WV-4HSRW WV-4HSRWT	YES	208V	19	15	30	34	7,000	
		240V	22	17	34	38	9,200	

INTRODUCTION

This manual contains information needed to properly service and repair Wells Bloomfield free-standing four-burner electric hotplate with ventless hood system.
This manual applies to the following Wells Manufacturing models:

WV-4HF, WV-4HFRW and WV-4HFRWT
WV-4HS, WV-4HSRW and WV-4HSRWT

For installation, operation and maintenance instructions, refer to Operation Manual p/n 303903.

FEATURES & OPERATING CONTROLS

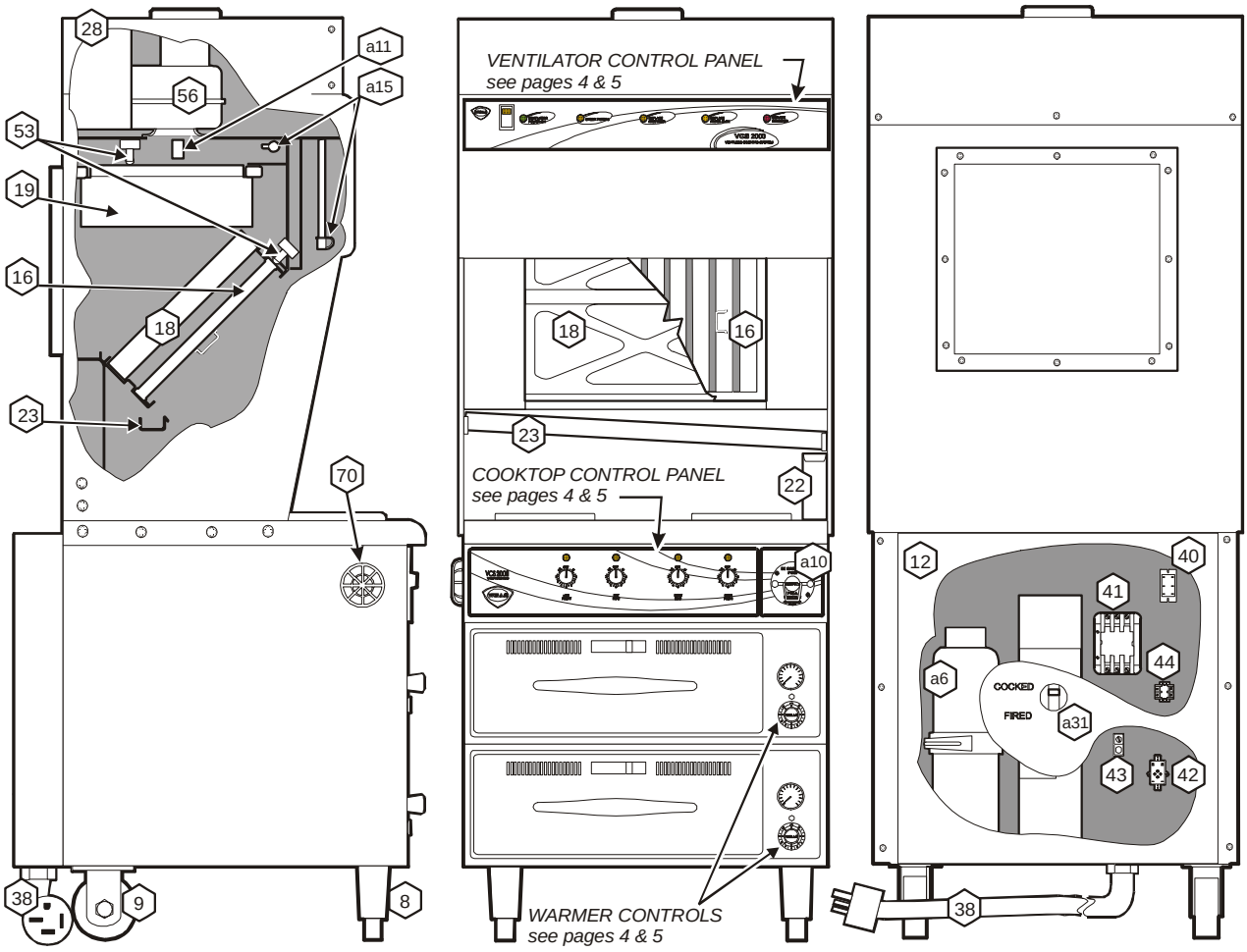


Fig. 1 Ventilator Section Operating Features & Controls

VENTILATOR SECTION

ITEM	DESCRIPTION	COMMENT
a6.	FIRE SUPPRESSION AGENT TANK (1.5 gal.)	Container for Ansulex™ Low-pH liquid fire suppression liquid.
8.	ADJUSTABLE (FRONT) LEG	Allows the unit to be leveled.
9.	RIGID (REAR) CASTER	Allows the unit to be easily positioned by lifting the front of the unit slightly.
a10.	MANUAL PULL STATION	Provides a means of manual activation of the fire suppression system. PULL ONLY IN CASE OF FIRE!
a11.	FUSIBLE LINKS	Automatically activates fire suppression system in the event of fire on the cooktop.
12.	LOWER REAR ACCESS PANEL	Allows access to Ansul® fire suppression agent tank (a6) and controls also access to main power contactor (41).
a15.	DISCHARGE NOZZLE	Fire suppression media discharges here (2 places).
16.	GREASE BAFFLE	Extracts and drains most grease and moisture from the air flow.
18.	PRE-FILTER ASSEMBLY	Comprises the PRE-FILTER FRAME and a replaceable PRE-FILTER. Stops larger particles of grease from reaching the FILTER PACK for reduced maintenance costs.
19.	HEPA/CHARCOAL FILTER PACK	Stops most grease and smoke particles. Also assists in some cooking odor removal.
22.	GREASE CUP	Collects grease/moisture drained from grease trough (23).
23.	GREASE TROUGH	Directs grease/moisture removed by grease baffle to grease cup.
28.	VENTILATOR EXHAUST DUCT	Exit point for ventilator airflow - on top left rear of unit. **DO NOT BLOCK**
a31.	STATUS INDICATOR	Displays status of fire suppression system (*COCKED* - *FIRED*) If *FIRED*, a buzzer will sound continuously.
38.	POWER CORD	6' cord and cap. Plug for NEMA 15-60R (receptacle by user).
40.	WARMER RELAY	Provides power to roll warmer section. Energized at all times except during fire safety shut-down.
41.	POWER CONTACTOR	Energizes cooktop only while ventilator section is sensed as operational.
42.	BUILDING FIRE ALARM RELAY	Reports fire alarm condition to building fire management system.
43.	GROUND LUG	Ground wire of power cord connects here.
44.	INTERLOCK TERMINAL	Provides connection for shut-down control by building fire management system.
56.	VENTILATOR FAN	Provides air movement for ventilation.
70.	COOLING FAN	Provides cooling for cooktop controls.

FEATURES & OPERATING CONTROLS (continued)

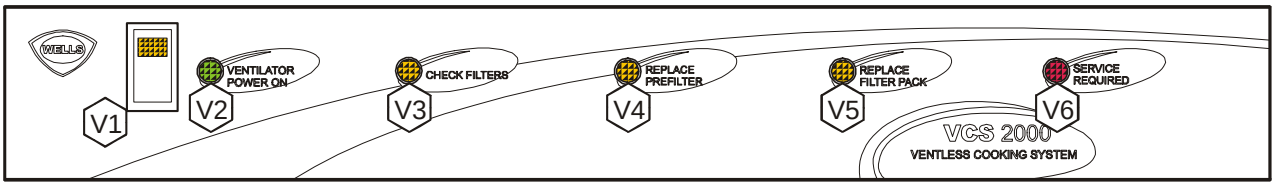


Fig. 2 Ventilator Section Controls & Indicator Lights

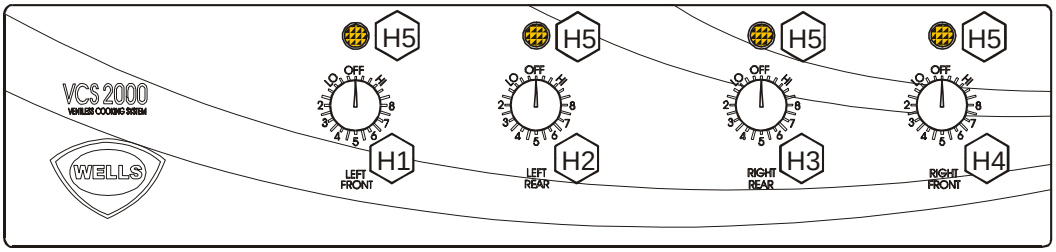


Fig. 3 Cooktop Section Controls & Indicator Lights

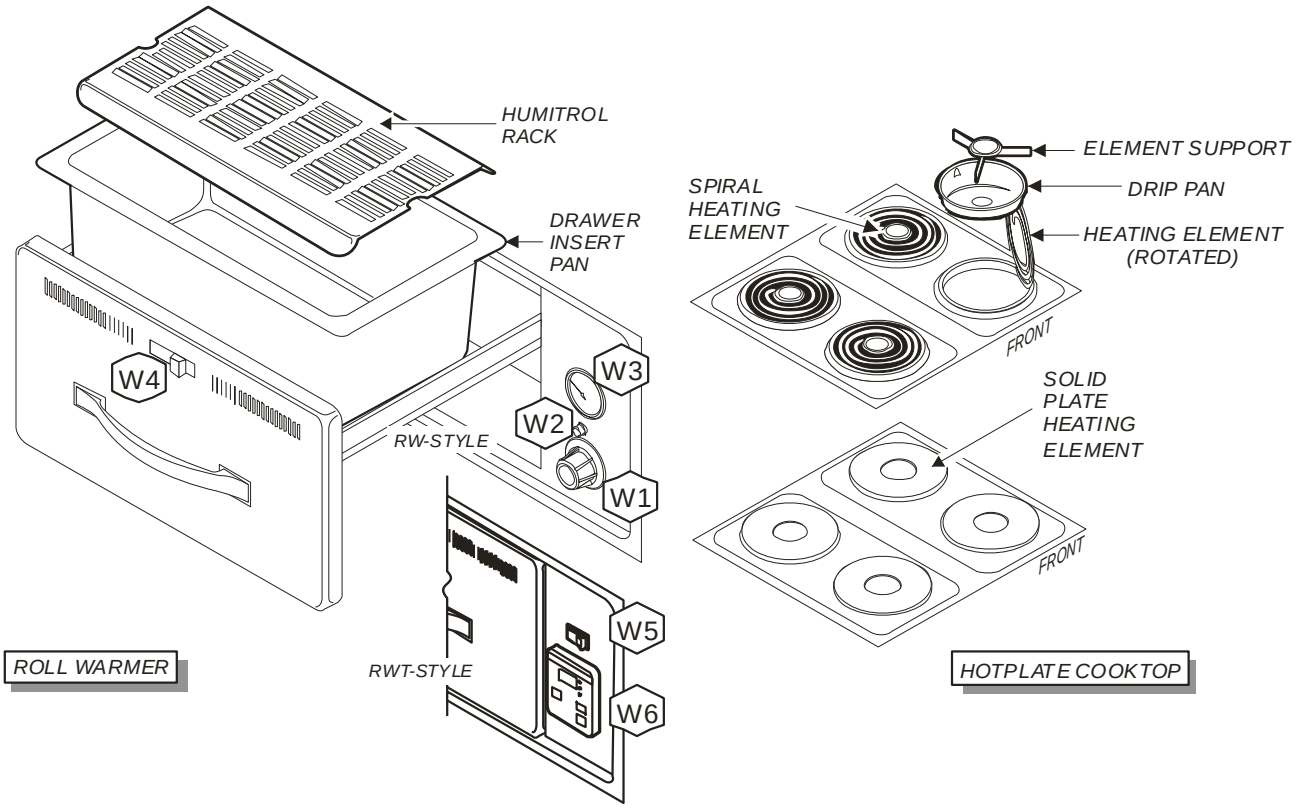
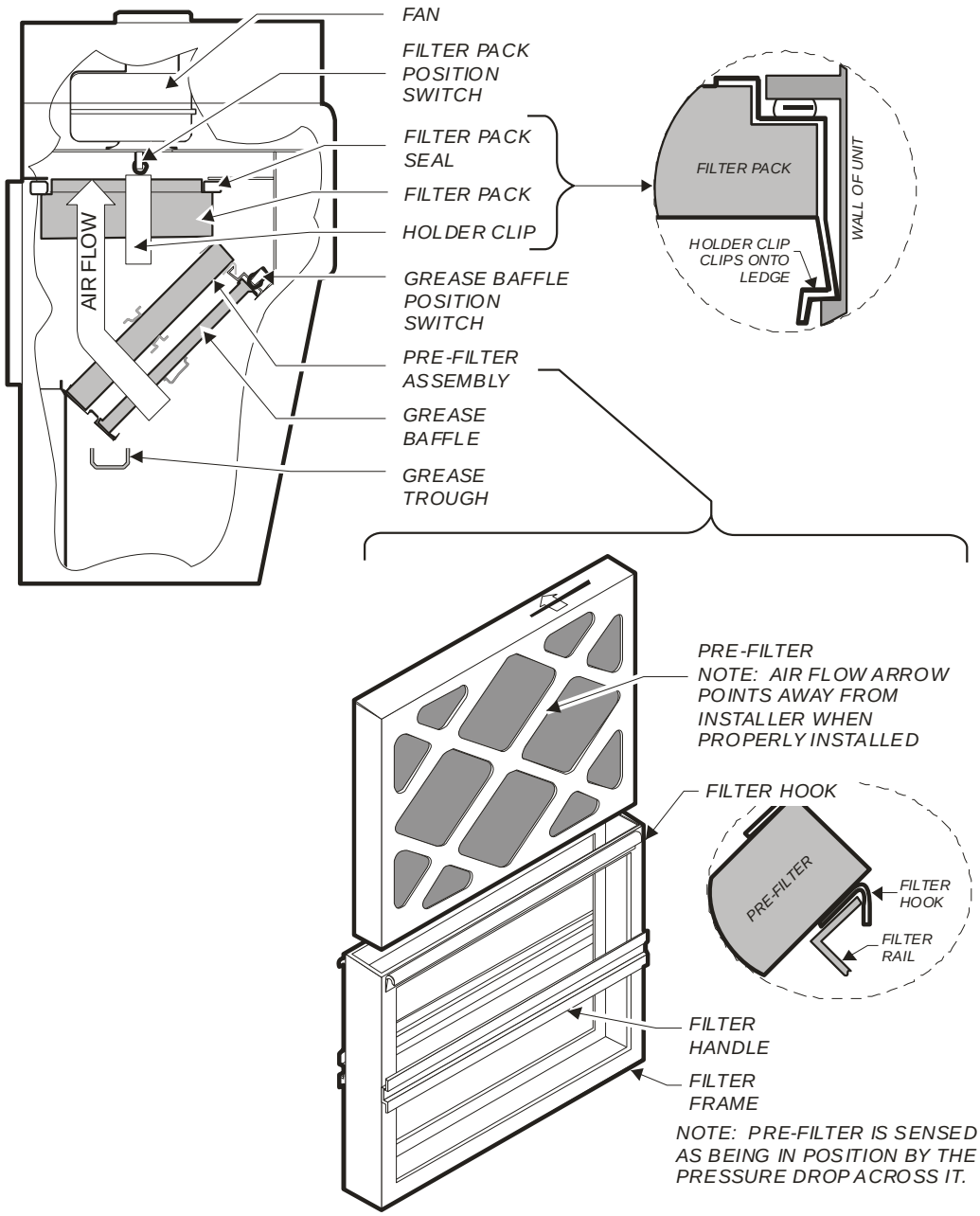


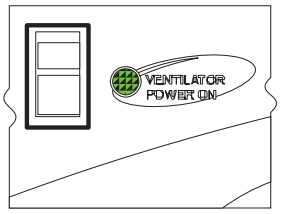
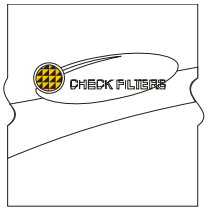
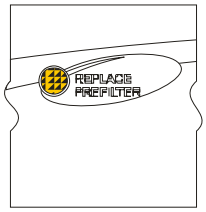
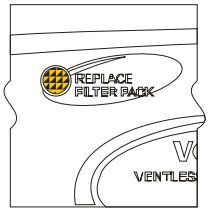
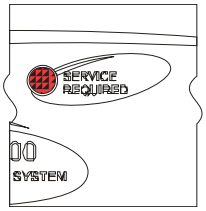
Fig. 4 Cooktop & Warmer Drawer Operating Features & Controls

ITEM	DESCRIPTION	COMMENT
VENTILATOR SECTION CONTROLS		
V1	POWER SWITCH	**Energizes blower motor. If, after 10 seconds, proper conditions are met, cooktop is energized.**
V2	POWER *ON* INDICATOR	GREEN. Glows when POWER switch is *ON.*
V3	*CHECK FILTERS* ALARM INDICATOR	AMBER. Glows if one or more filters are out of position. Check all filters and baffles for proper installation.
V4*	*REPLACE PREFILTER* ALARM INDICATOR	AMBER. Glows when PREFILTER is approaching the end of its service life and must soon be replaced.
V5*	REPLACE FILTER PACK ALARM INDICATOR	AMBER. Glows when FILTER PACK is approaching the end of its service life and must soon be replaced.
V6*	SERVICE REQUIRED ALARM INDICATOR	RED. Glows when PREFILTER and/or FILTER PACK has reached the end of its service life and is too loaded to allow sufficient air flow. Filter MUST be replaced. Appliance is *SHUT DOWN* until expended filters are replaced.
COOKTOP SECTION CONTROLS		
H1	LEFT FRONT HOTPLATE CONTROL	Infinite switch control of temperature of one hotplate section.
H2	LEFT REAR HOTPLATE CONTROL	Infinite switch control of temperature of one hotplate section.
H3	RIGHT REAR HOTPLATE CONTROL	Infinite switch control of temperature of one hotplate section.
H4	RIGHT FRONT HOTPLATE CONTROL	Infinite switch control of temperature of one hotplate section.
H5	POWER ON INDICATOR	AMBER. Glows when associated temperature control is turned *ON.*
H6	HOT SURFACE INDICATOR	RED. Glows any time surface is above 150ºF
OPTIONAL WARMER SECTION CONTROLS		
W1	WARMER TEMPERATURE CONTROL	Infinite switch control of temperature of one warmer drawer.
W2	POWER ON INDICATOR	AMBER. Glows when associated temperature control is turned *ON.*
W3	THERMOMETER (OPTIONAL)	Shows temperature in warmer drawer. Must be ordered at time of initial equipment build.
W4	HUMIDITY CONTROL	Slide control of shutters to control air circulation within the warmer drawer.
W5	POWER SWITCH	Energize an individual warmer drawer.
W6	CONTROL MODULE	Adjust setopint, view setopint and cavity temperatures.

HOOD SECTION - FILTER ARRANGEMENT



HOOD SECTION - SERVICE INDICATOR LIGHTS

	**POWER SWITCH**	Energizes the ventilator section. When all three filters are sensed as being in their proper position, and sufficient airflow is proven, the cooking appliance contactor is energized.
	INDICATOR LIGHT (GREEN) **VENTILATOR POWER ON**	When lit, indicates that electrical power is available, and that the power switch (V.01) is turned *ON.*
	INDICATOR LIGHT (AMBER) **CHECK FILTERS (POSITION)**	When lit, indicates that the BAFFLE, PRE-FILTER and/or FILTER PACK is not in its proper position, or that an interlock switch is out of adjustment. Controlled by: Plunger switches position monitors for Filter Pack and Grease Baffle; and, vacuum switch S3 for Pre-Filter.
	INDICATOR LIGHT (AMBER) **REPLACE PREFILTER**	When lit, indicates that the pre-filter is approaching the end of its service life. **ALWAYS HAVE A SPARE PRE-FILTER ON HAND FOR QUICK REPLACEMENT.** Controlled by vacuum switch S1.
	INDICATOR LIGHT (AMBER) **REPLACE FILTER PACK**	When lit, indicates that the filter pack is approaching the end of its service life. **REPLACE FILTER PACK PROMPTLY!** Controlled by vacuum switch S2.
	INDICATOR LIGHT (RED) **SERVICE REQUIRED**	Indicates that either the pre-filter or the filter pack is individually clogged (the individual indicator light may be lit), or that the the airflow drop across both filters is critical. As a cost saving measure, **always change a dirty pre-filter first** (when lights V.04 & V.05 are *not lit*, and red light V.06 is *on*). **Note:** *Power to the cooking appliance will be de-energized whenever this RED "**SERVICE REQUIRED**" indicator light is lit.* When lit, the air flow is insufficient to meet appliance vapor capture levels requirements. Controlled by vacuum switch S4.

HOOD SECTION - OPERATIONAL NOTES

WARNING:
FIRE AND HEALTH HAZARDS

DO NOT bypass or attempt to bypass the filter placement interlocks. Operating the appliance without filters properly in place will compromise the fire protection and air filtration capabilities of this unit. Serious personal injury and/or substantial property damage may result.

NOTICE:
Operating without all filters properly in place, and/or operating with filter placement interlocks defeated will void the manufacturer's warranty.

IMPORTANT:
NEVER wash the PREFILTER or FILTER PACK.This will shut down the cooking appliance. (Red "*SERVICE REQUIRED*" light will turn *ON*).

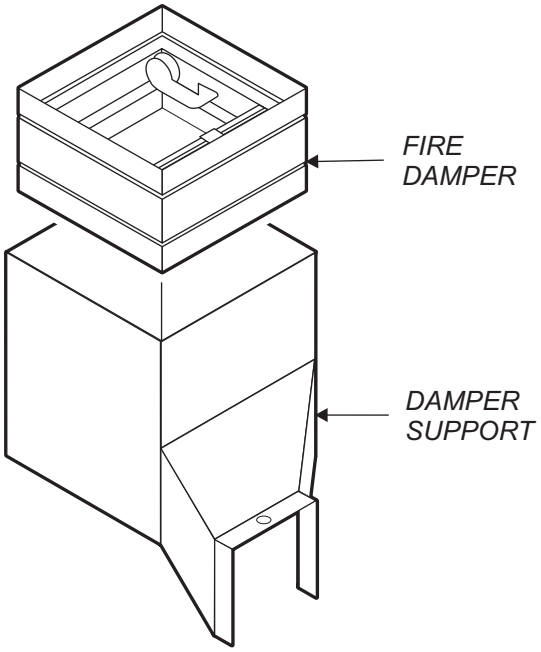
REPLACE PREFILTER and *REPLACE FILTER PACK* indicator lights provide a timely warning that a system shut-down is imminent. The actual time between the indicator light coming on and the loss of cooking appliance power will depend upon the cooking conditions.

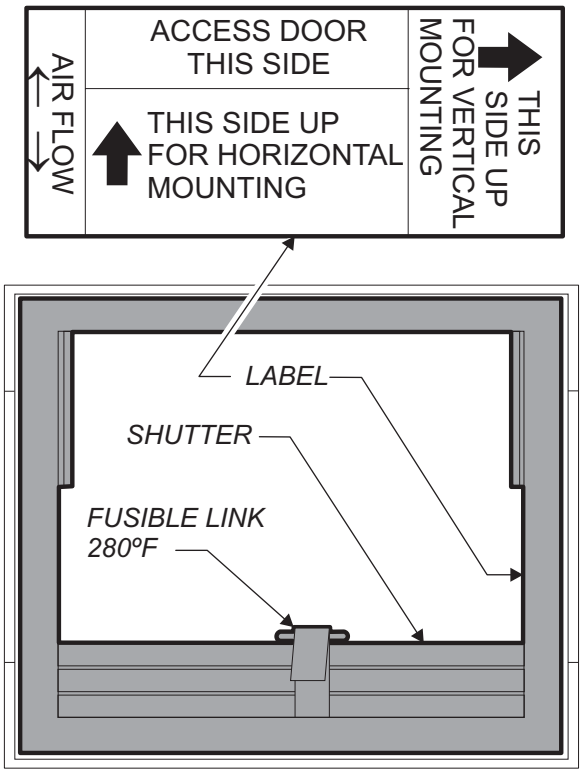
Anytime a dirty PRE-FILTER is replaced, the system airflow will increase. If the condition of the FILTER PACK is marginal, the *REPLACE FILTER PACK* light could then come on. If this happens, a fresh FILTER PACK must be installed within a reasonably short time. Loss of airflow through the old filter pack will soon cause a system shut-down when the airflow falls below minimum vapor capture levels.

KEEP A SPARE FILTER PACK ON HAND.

IMPORTANT: If you decide to "get the most" out of the old filter pack, and continue to use it until a system shut-down happens, it is advisable to have a fresh filter pack readily at hand, and have someone available who is capable of replacing it. Otherwise, you may experience an extended down time, with consequent associated loss of business.

The manufacturer assumes no liability for loss of business due to a system shutdown caused by a dirty pre-filter and/or filter pack (i.e. red *SERVICE REQUIRED* light is on), *when the user fails to have the proper replacement pre-filter and/or filter pack on hand*.





FIRE DAMPER INSTRUCTIONS

1. The FIRE DAMPER is accessible by removing the TOP PANEL The FIRE DAMPER sets in the DAMPER SUPPORT and may be removed by lifting straight up.

2. The FIRE DAMPER normally needs no maintenance. If it becomes heavily contaminated with dust and/or grease, it must be replaced.

3. If the FIRE DAMPER malfunctions or if the fusible link releases, the manufacturer recommends that the entire FIRE DAMPER ASSEMBLY be replaced.

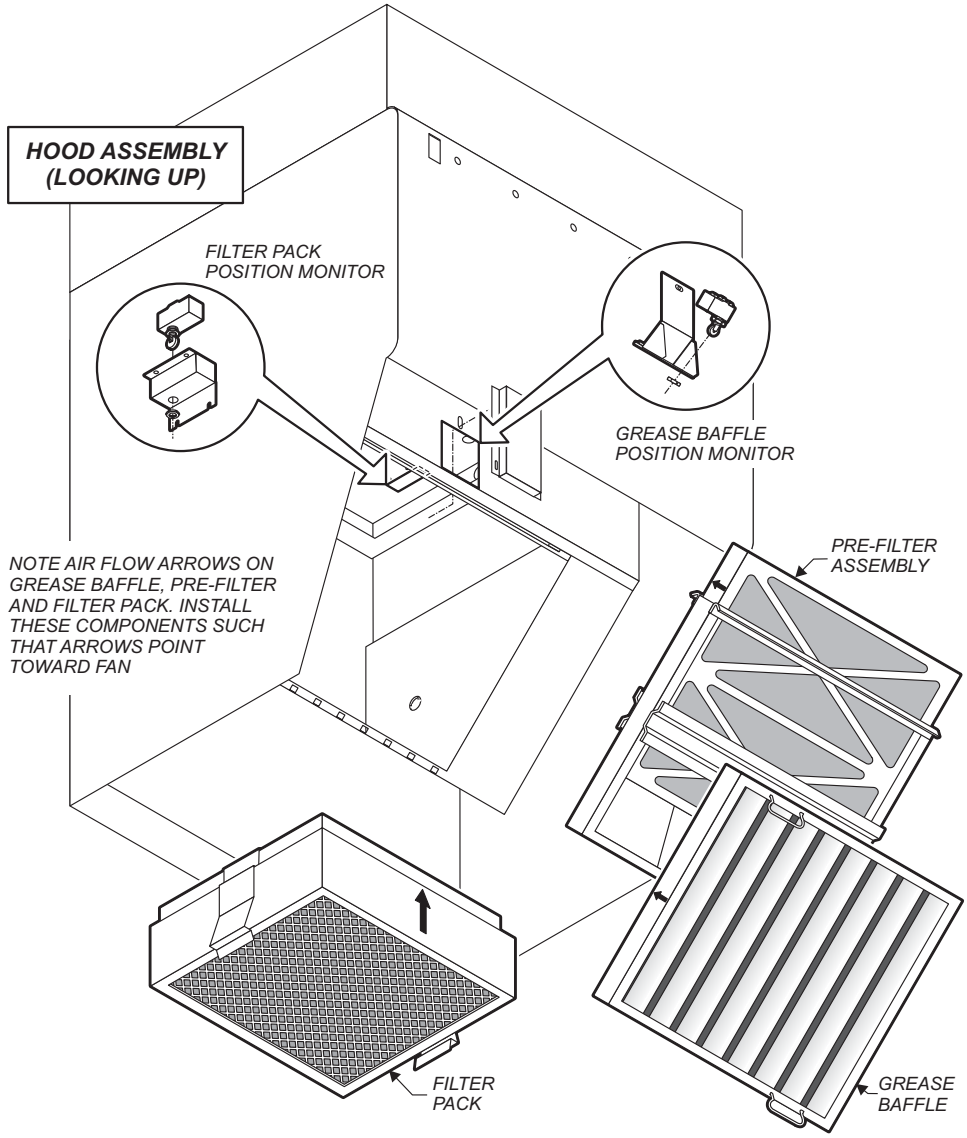
4. Reinstall the FIRE DAMPER with the “THIS SIDE UP FOR HORIZONTAL MOUNTING” arrow pointing away from the BLOWER.

IMPORTANT:
Replace the entire fire damper assembly if the link trips, or if the damper mechanism becomes heavily contaminated with dust and/or grease.

While the fusible link alone may be replaced, once the damper has tripped it may no longer function reliably.

Contact factory for pricing and availability.

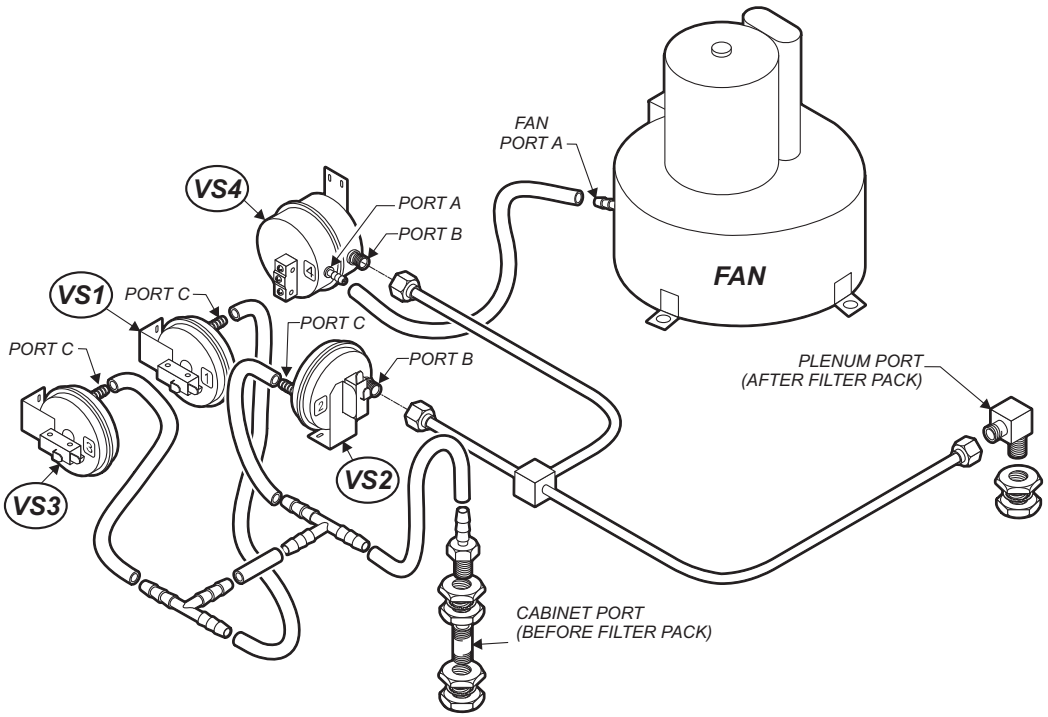
HOOD SECTION - FILTER SYSTEM


HOOD ASSEMBLY (LOOKING UP)
FILTER PACK POSITION MONITOR
GREASE BAFFLE POSITION MONITOR
NOTE AIR FLOW ARROWS ON GREASE BAFFLE, PRE-FILTER AND FILTER PACK. INSTALL THESE COMPONENTS SUCH THAT ARROWS POINT TOWARD FAN
PRE-FILTER ASSEMBLY
FILTER PACK
GREASE BAFFLE

NOTE:
Change the pre-filter as soon as the "*REPLACE PRE-FILTER*" indicator glows in order to extend the service life of the filter pack.

NOTE:
The charcoal portion of the filter pack is an aid in controlling cooking odors only. It will not completely eliminate such odors.

1. The GREASE BAFFLE separates grease particles and water vapor from the air stream by the centrifugal force of the air moving through its inter-leaved baffle plates. Ejecta is collected in the GREASE CUP through drain holes in the baffle frame and cabinet.
   The GREASE BAFFLE POSITION MONITOR plunger switch controls electric power to the ventilator fan.
2. The PRE-FILTER is composed of a replaceable media filter and a filter-retaining gage. The pre-filter captures the bulk of grease vapors. Pre-filter position is monitored by a vacuum switch, which is in the control circuit of the cooking appliance contactor.
3. The FILTER PACK is composed of a high-efficiency filter to capture grease vapors down to a very small particle size; and, an activated charcoal filter to help control cooking odors.
   The FILTER PACK POSITION MONITOR plunger switch is in the control circuit of the cooking appliance contactor.



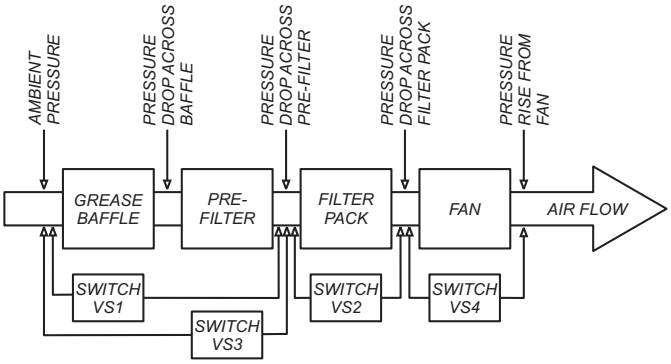
SWITCH FUNCTION

VS1 PRE-FILTER POSITION MONITOR
Unit will not function unless a pre-filter is properly installed, as sensed by the pressure drop across it. Pressure drop across the pre-filter must exceed setting before cooking appliance is energized. Insufficient pressure drop will illuminate "*CHECK FILTER*" indicator.

VS2 FILTER PACK ALERT
Will illuminate "*REPLACE FILTER PACK*" indicator if pressure drop across the filter pack exceeds setting.

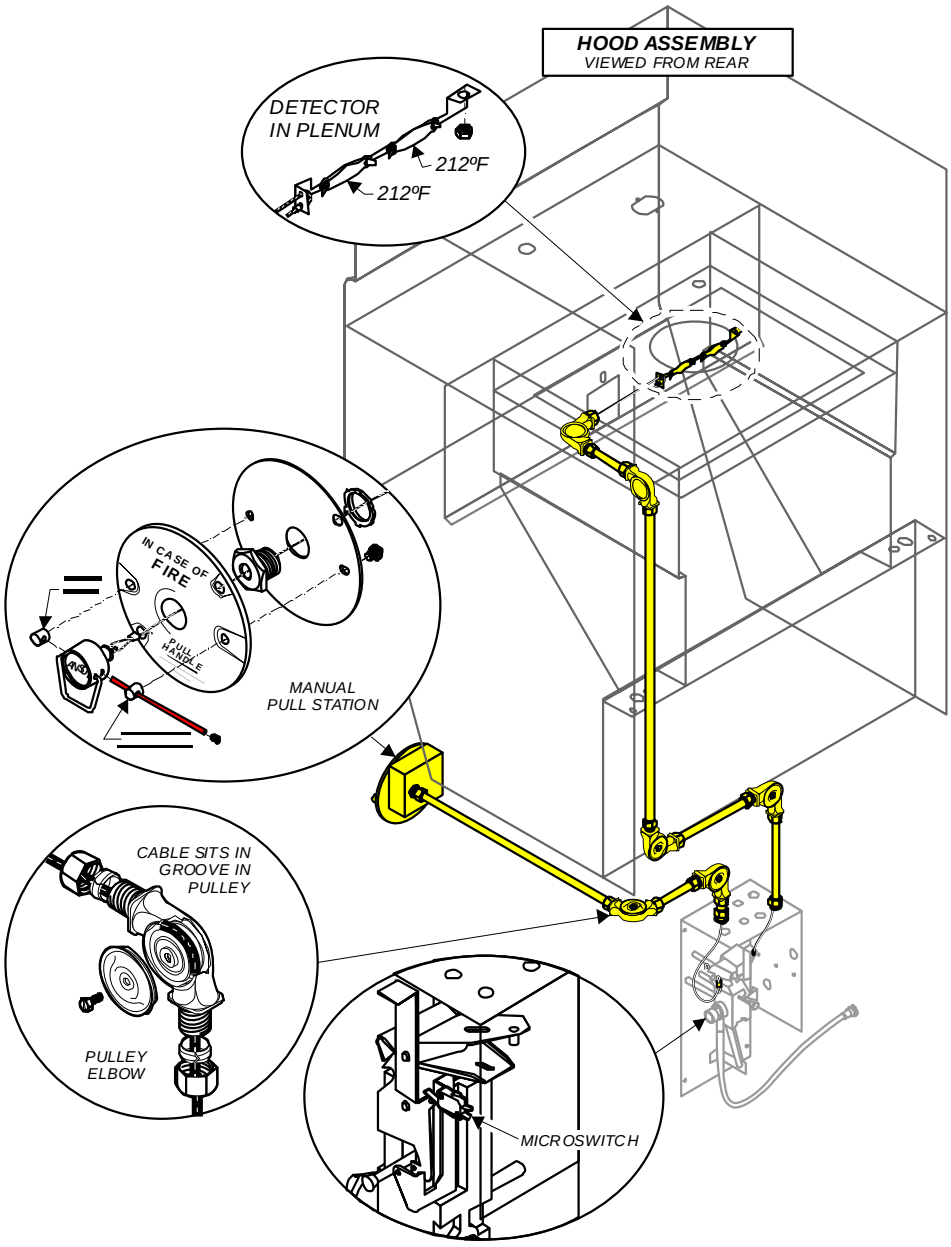
VS3 PRE-FILTER ALERT
Will illuminate "*REPLACE PRE-FILTER*" indicator if pressure drop across the pre-filter exceeds setting.

VS4 AIR FLOW MONITOR
Pressure drop must exceed setting before cooking appliance is energized. As filters become plugged, airflow decreases. Beyond the useful life of the filters, air flow will be insufficient to maintain the required pressure drop, which will shut-down ventilator fan and cooking appliance and illuminate "*SERVICE REQUIRED*" indicator.



IMPORTANT:
Vacuum switch settings are factory set, and are not adjustable.

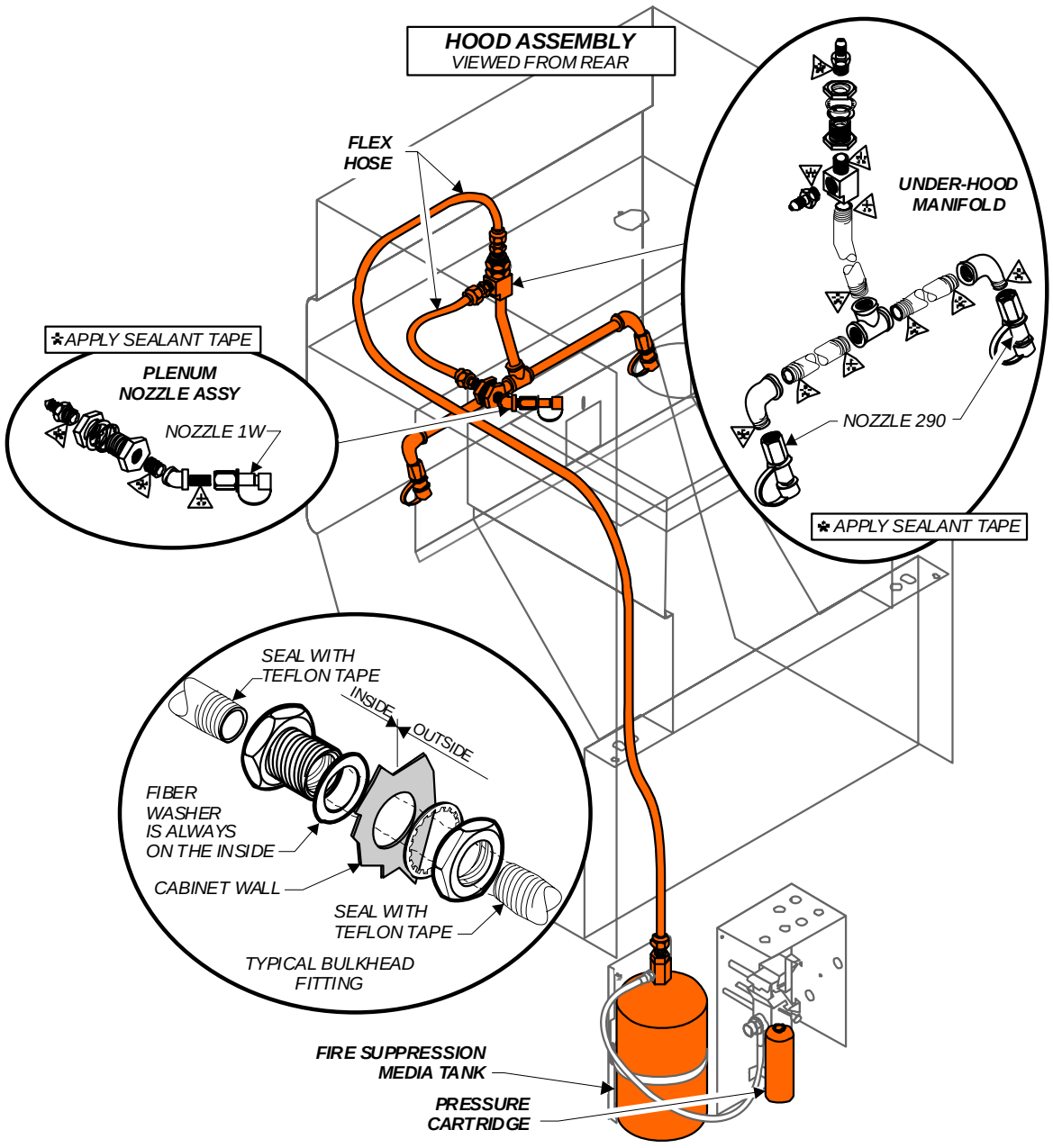
HOOD SECTION - ANSUL® FIRE DETECTION SYSTEM



IMPORTANT:
All servicing of the fire detection system to be performed by an authorized Ansul® agent only.

1. Cooking appliance protected by two 212ºF fusible links connected in series. Fuse links are located in the plenum at the entry to the ventilator fan.
2. Fire suppression system may be activated by the manual pull station on the front of the unit, or by a remote manual pull station if installed.
3. A microswitch in the Ansul® Automan assembly allows connection to a building fire alarm system.

HOOD SECTION - ANSUL® FIRE SUPPRESSION SYSTEM



1. Actuation of the Ansul® system will cause the pressure cartridge seal to be punctured, which will pressurize the 1.5 gallon media tank. Fire suppression media will be forced through the piping where it will spray from the various nozzles.
2. The cooking appliance surface is protected by two type 290 nozzles.
3. The plenum area between the filters and the fan is protected by a single type 1W nozzle.
4. The pressure integrity of the plenum bulkheads is maintained by the use of compression fittings at the piping penetrations.
5. Nozzles are protected from grease contamination by press-on silicone rubber caps.

IMPORTANT:
All servicing of the fire suppression system to be performed by an authorized Ansul® agent only.

HOOD SECTION - TROUBLESHOOTING SUGGESTIONS

SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Entire unit inoperative No lights glow No buzzer sounds	Unit unplugged.	Plug power cord into receptacle
	Circuit breaker off or tripped	Reset circuit breaker
	Damaged power cord	Replace power cord
	Damaged power switch	Check switch. Replace as req'd.
	External interlock jumper loose or damaged (unit is not connected to building fire control system)	Check jumper. Repair or replace as required
	External interlock open (unit connected to building fire control system)	Locate and rectify open circuit condition in building fire control system.
Cooking appliance inoperative "POWER" light on hood *ON*. Vent fan working ok with no service	Contactor, wiring or connectors damaged	Replace contactor Repair wiring
Cooking appliance inoperative "POWER" light on hood *ON*. Vent fan working OK. "SERVICE REQUIRED" light *ON*	Vacuum line to switch VS4 restricted	Check for restriction in vacuum line to switch.
	Vacuum switch VS4 open or defective	Check vacuum switch VS4. Replace as req'd.
	Vacuum pickup port in plenum, or vacuum port on blower plugged	Clean vacuum ports **NOTE:** Vacuum port in plenum may appear as a place to attach a nozzle. Do not attach a nozzle here. It will block the vacuum signal (see pg 11).
	Fire damper tripped	Replace fire damper NOTE: While the fusible link alone may be replaced, once the damper has tripped it may no longer function reliably.
Vent fan working OK, but amber "CHECK FILTERS" light stays *ON*	Grease baffle and/or filter pack position switch(es) open	Missing or un-seated filter assy. Reseat filter or adjust interlock switch.
	Vacuum switch VS1 open or damaged	Be sure pre-filter is hooked in position. Check for damaged vacuum line, or one that is disconnected at the vacuum switch or pick-up port. Also check port for grease contamination.

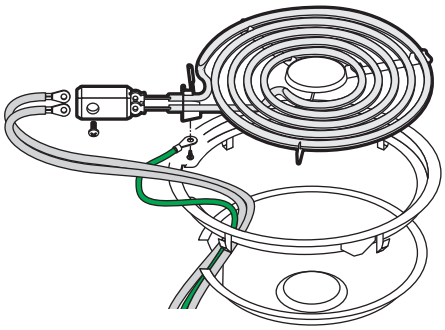
HOOD SECTION - TROUBLESHOOTING SUGGESTIONS (continued)

SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
Vent fan working OK, but amber "REPLACE PREFILTER" light *ON*.	Prefilter is at end of service life	Replace prefilter
	Vacuum Switch VS3 damaged	Replace vacuum switch VS3
"REPLACE PREFILTER" light turns on some of the time.	Pre-filter frame not hooked in position at top	Hook metal pre-filterframe at top to prevent air blowing around filter
	Pre-filter position switch SW1 misadjusted or damaged.	Check switch SW1, adjust or replace
	Prefilter is nearing end of service life	Replace prefilter
"REPLACE FILTER PACK" light *ON*.	Filter pack nearing end of its service life	Replace filter pack
	Filter pack vacuum switch VS2 lines restricted or switch damaged.	Check switch VS2, repair vacuum lines or replace switch.
Vent fan not operating and buzzer is sounding.	Appliance newly installed and Ansul® system not yet charged.	Check status of Ansul® system at rear of unit, if fired, **call Ansul® Service Distributor** for set-up.
	Ansul® system has been set off by overtemp condition, or manual pull station has been activated.	Check status of Ansul® system at rear of unit, if fired, **call Ansul® Service Distributor** for replacement of fire suppression agent and propellant. If fuse link has been activated, it must be replaced prior to re-cocking the Ansul® system.
Vent fan not operating. Buzzer silent. Green "POWER" light *ON.* Amber "CHECK FILTER" light and red "SERVICE REQUIRED" light *ON*.	Grease baffle not installed	Install grease baffle.
	Grease baffle position switch SW2 misadjusted or damaged.	Check switch SW2, adjust or replace

HOTPLATE SECTION

CAUTION:
BURN HAZARD

Hotplate burner surfaces are very hot during operation. Allow unit to cool before performing any service.



IMPORTANT:
This element is designed for use with high-temperature copper-tin terminals. Do not use stainless steel terminals.

SPIRAL HEATING EL:EMENT REPLACE MENT

Applicable to Wells WV-4HS-series ventless appliances.

Wells part number 50293: Revised to the latest UL requirements, new replacement elements may connect differently than previously available replacement elements.

To install a new element in an existing appliance:

1. Disconnect appliance from electric power and allow to cool. Disconnect and remove old element.
2. Power leads require #8 high-temperature copper-tin ring terminal connectors. Ground lead requires #10 high-temperature copper-tin ring terminal connector. Replace or install the appropriate connector terminals as required.
3. Mount new element.
4. Route wiring through trim ring as shown. Connect power and ground leads.
   a. Be sure to reconnect ground wire to mounting clip of new element.
   b. Slide insulator onto new element before connecting leads.
   c. When properly installed, connector screws will hold insulator in place.
5. Reconnect appliance to electric power and test for proper operation.

HOTPLATE SECTION - TROUBLESHOOTING SUGGESTIONS

DESCRIPTION	POSSIBLE PROBLEM	SUGGESTED REMEDY
Hotplate will not heat	Hood section not "*ON*"	Verify that Hood Power Switch is "*ON*". If "*SERVICE REQUIRED*" indicator is lit, rectify filter problem.
One hotplate does not heat	Temperature control knobs not set to desired temperature	Set to desired temperature
	Cooling fan not operating	Check cooling fan and associated wiring for hotplate control section. Replace as required.
	Damaged internal component	Check infinite switch, element, and wiring. Replace damaged components, repair wiring and loose connections as required.
Hotplate does not get hot enough	240V unit operating on 208V	Verify operating voltage Operate on proper voltage

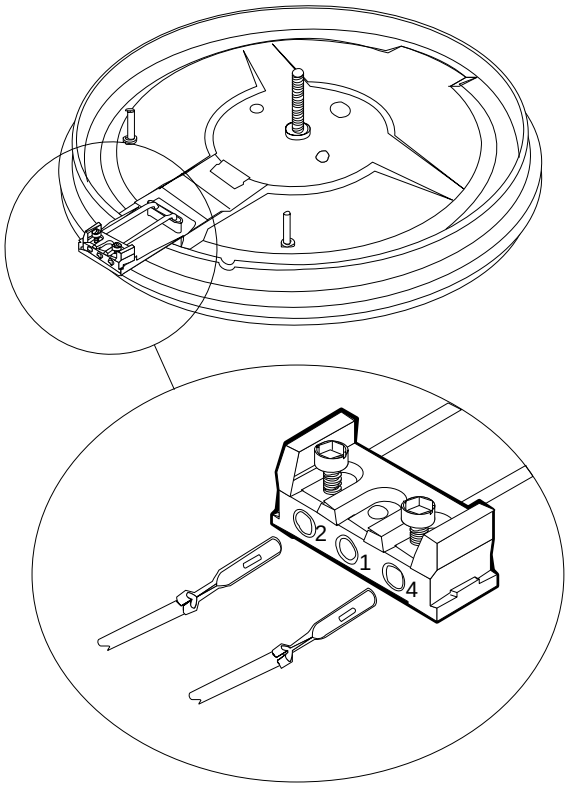
SOLID (FRENCH PLATE) ELEMENT REPLACEMENT

Applicable to Wells WV-4HF-series ventless appliances.

Wells has introduced an upgraded element terminal lug for solid (French plate) element cooktops. Units built prior to June 1, 2001 will require this upgrade when replacing elements.

1. When only the Ceramic Terminal Block is damaged and the Element wire is not fused: Replace with Kit 503972. This Kit replaces the Terminal Block with the new wire set. **NOTE:** Kit p/n 503972 does not include the element.

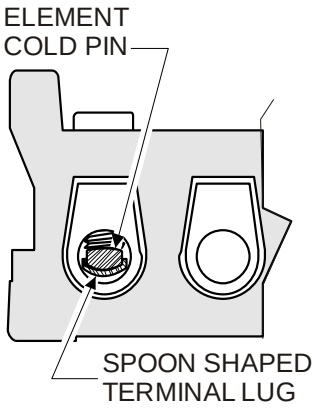
2. If the element or element wires are damaged, or if the connector is fused to the power leads, replace with complete element kit 503973 (240V).

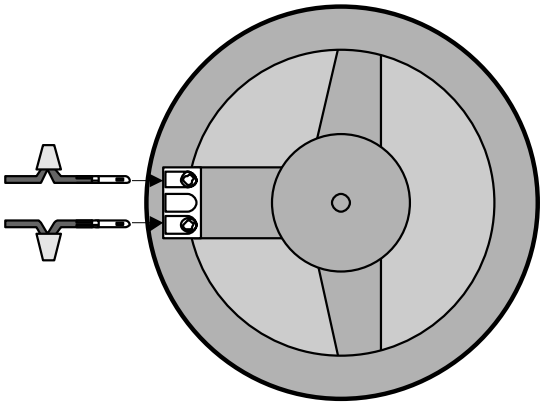


ELEMENT, NEW TERMINAL LUG AND CERAMIC INSULATOR PN 503973 (240V)

CAUTION:
BURN HAZARD

Hotplate burner surfaces are very hot during operation. Allow unit to cool before performing any service.

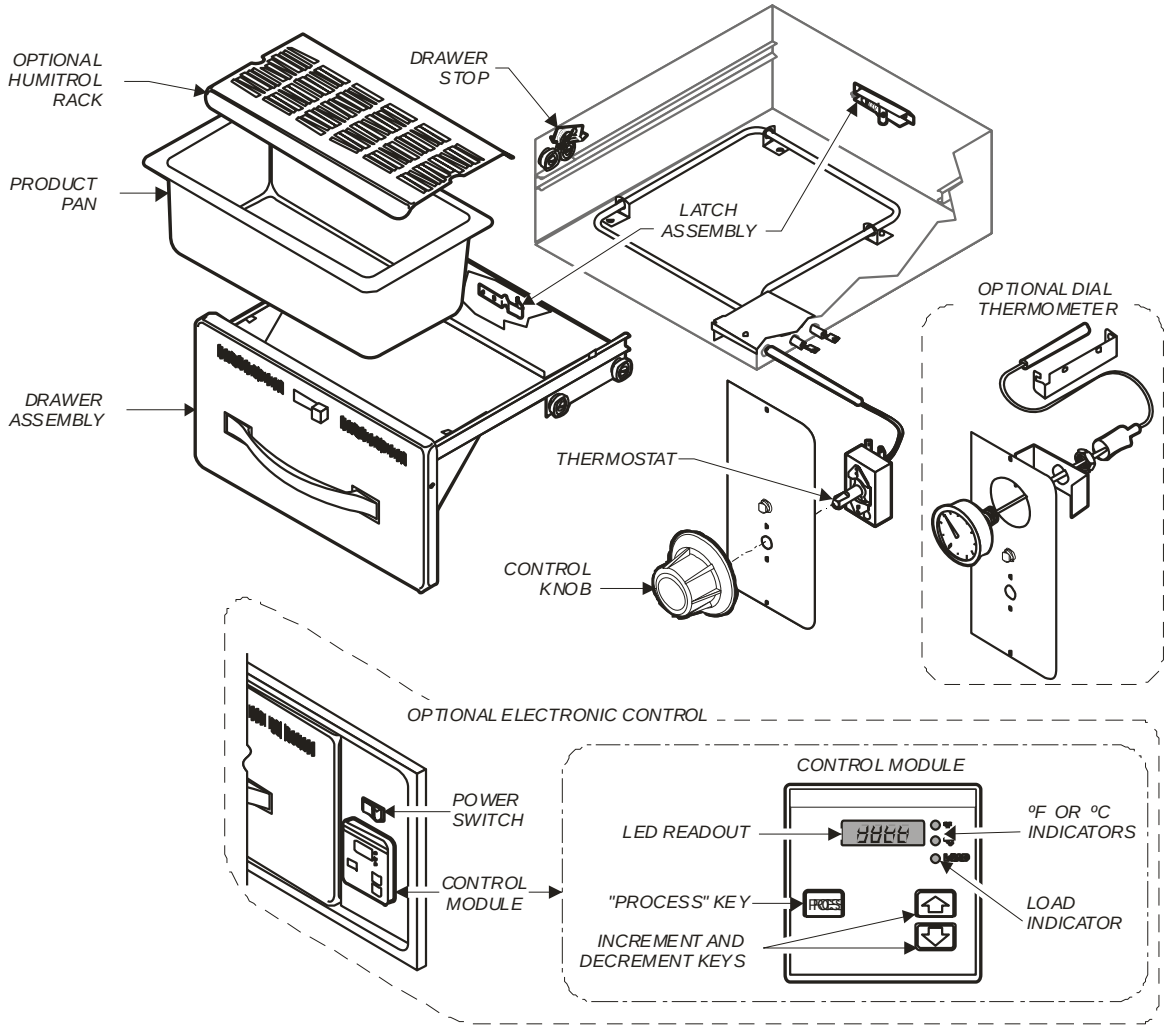




New wires with lugs spliced to existing wire set and inserted into new insulator. Tighten set screws securely.

IMPORTANT: Do not cut fused wire on element to replace terminal block, this voids U.L.

DRAWER WARMER SECTION - OPERATIONAL NOTES



CAUTION:
BURN HAZARD

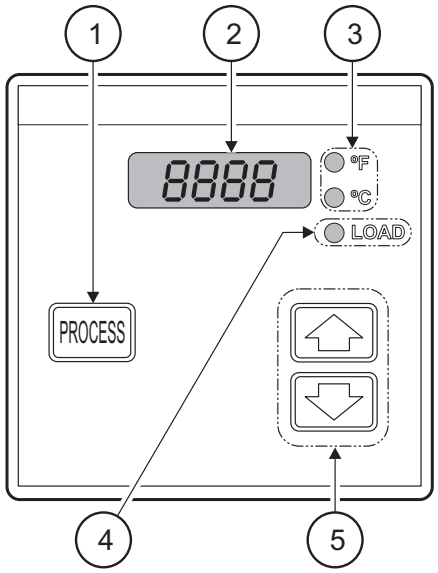
Interior of drawer warmer cavity will be hot during operation. Allow unit to cool before performing any service.

NOTE:
In the absence of a drawer warmer appliance, the WVG-136 is equipped with a storage cabinet in the base. This single cabinet has two doors.

1. The optional drawer warmer unit is a Wells RW-26HD or RWT-26HD two-drawer roll warmer unit.
2. The drawer warmer has two individually controllable sections.
   a. Control of RW-style unit is via bulb and capillary thermostat with SPST switch.
   b. Control of RWT-style unit is via electronic controller.
3. Each section is heated by a single element of roughly rectangular configuration.
4. Drawer warmer is powered by the drawer warmer relay
5. Optional dial thermostat may be located on either or both drawer sections.
6. Digital controller will replace thermometer-equipped units in new production. Thermometer-equipped units are to become obsolete.

CONTROL MODULE

ITEM	DESCRIPTION
1	PROCESS Key: Press to view actual temperature of cavity.
2	4 Character LED Display: Normally shows SETPOINT temperature.
3	ºF or ºC Indicator: Glows to indicate if unit is configured for degrees Fahrenheit or degrees Celsius.
4	LOAD Indicator: Glows when heating element is energized.
5	Increment and Decrement Keys: Press UP arrow to increase Press DOWN arrow to decrease

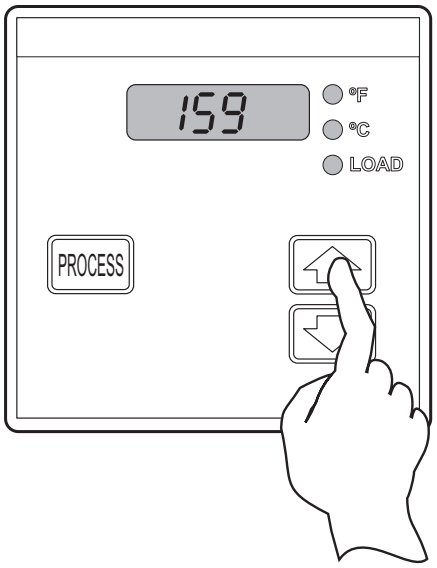


SET SETPOINT TEMPERATURE

Press an arrow key:
UP arrow to increase
DOWN arrow to decrease
Release key when desired setpoint temperature is displayed.

Reading is locked into memory 3 seconds after last key stroke.

Minimum setpoint is 140ºF (60ºC)
Maximum setpoint is 250ºF (121ºC)



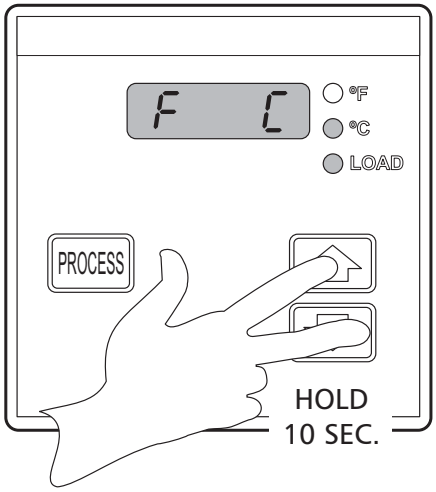
CHANGE DISPLAY MODE (ºF or ºC)

Press and hold UP arrow and DOWN arrow keys for 10 seconds.

Release keys when display reads F C.

Within 3 seconds, press UP arrow or DOWN arrow key until desired indicator (ºF or ºC) glows.

The new value will lock into memory 3 seconds after last keystroke.



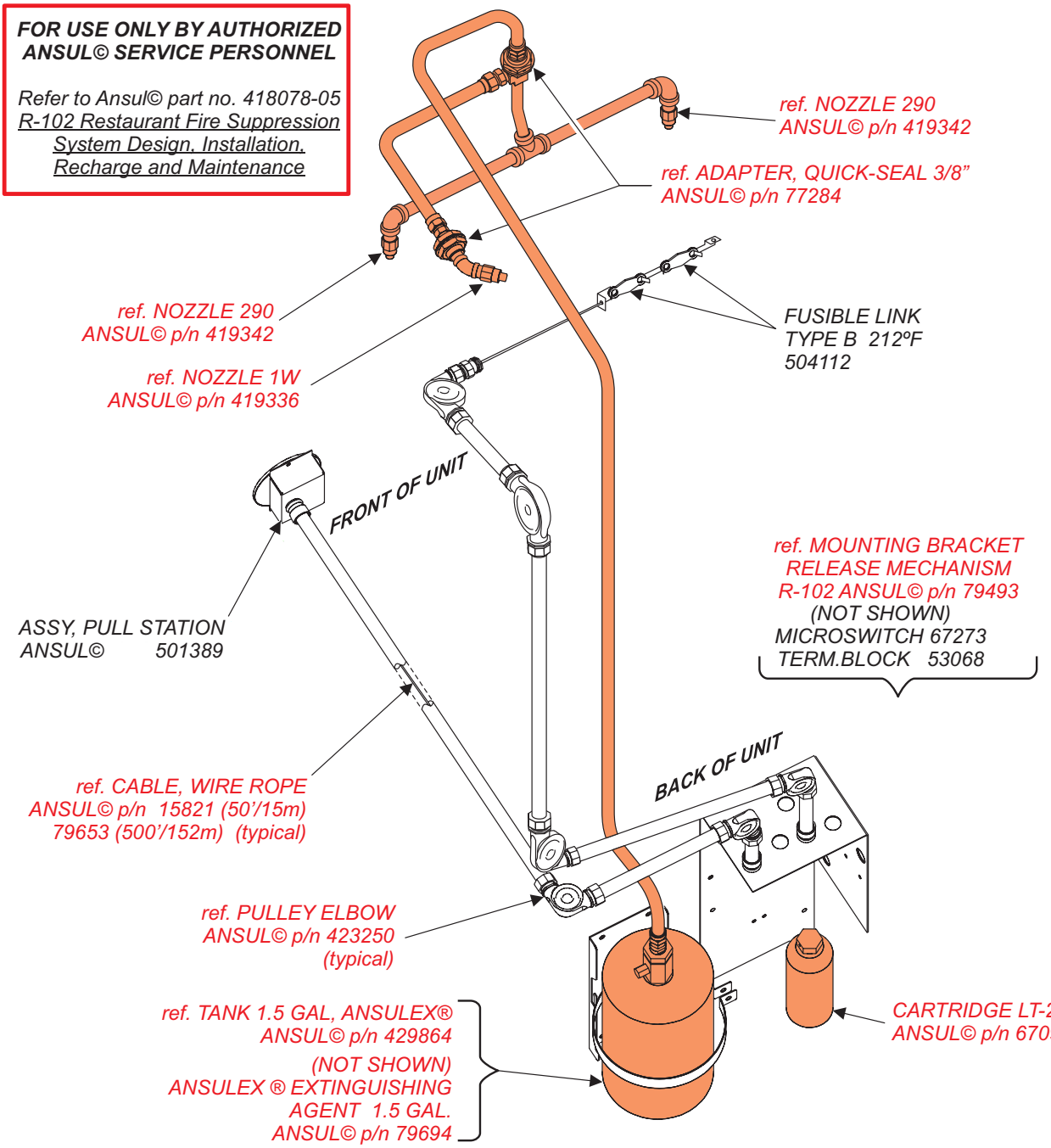
DRAWER WARMER TROUBLESHOOTING SUGGESTIONS

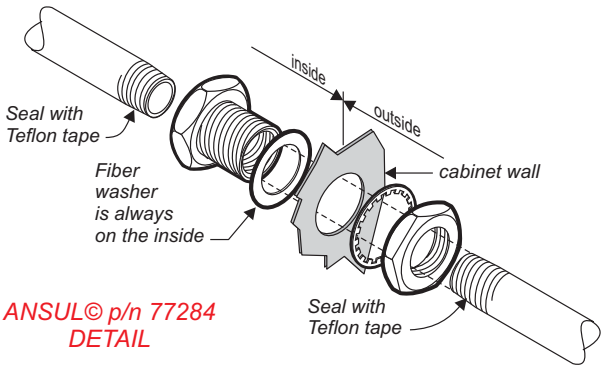
SYMPTOM	POSSIBLE CAUSE	SUGGESTED REMEDY
No lights or heat (both drawers)	Hood power switch not "*ON*"	Press power switch to "*ON*" NOTE: Drawer warmer is energized any time hood power switch is "*ON*" and Ansul® system is ready. Hood need not be operating.
No heat (one drawer)	Temperature control not set	Set for desired temperature.
	Damaged thermostat or heating element (RW-style units)	Inspect thermostat, heating element, wiring and connections. Repair/replace as necessary.
	Damaged controller or temperature sensor (RWT-style units)	Inspect controller, temperature sensor, wiring and connections. Repair/replace as necessary.
Runaway temperature (one drawer)	Damaged thermostat or ther-mobulb capillary tube (RW-style units)	Inspect cap tube for kinks or breaks. Replace thermostat.
	(RWT-style units)	Unlikely to fail "hot" due to controller or sensor malfunction. Inspect for shorted wiring.
Food dries out	Humidity control (air vent) not set	OPEN air vent for dry operation. CLOSE air vent for moist operation.
	Water in pan evaporated or low	Add water to pan.
Food gets soggy	Food contacting water	Use a Humitrol Rack
	Water level too high	Water should be no more than 1/2" deep
	Humidity control (air vent) not set	OPEN air vent for dry operation. CLOSE air vent for moist operation.
Drawer falls open	Drawer latch catch roller not extended before closing drawer	Be sure catch roller is extended before installing drawer.
	Drawer latch damaged	Replace drawer latch
Drawer falls out when opened	Drawer stop dirty	Clean and lubricate drawer stop
	Drawer stop damaged	Replace drawer stop

PARTS BREAKDOWN for ANSUL® COMPONENTS

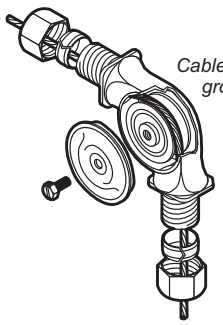
FOR USE ONLY BY AUTHORIZED ANSUL© SERVICE PERSONNEL

Refer to Ansul© part no. 418078-05 R-102 Restaurant Fire Suppression System Design, Installation, Recharge and Maintenance



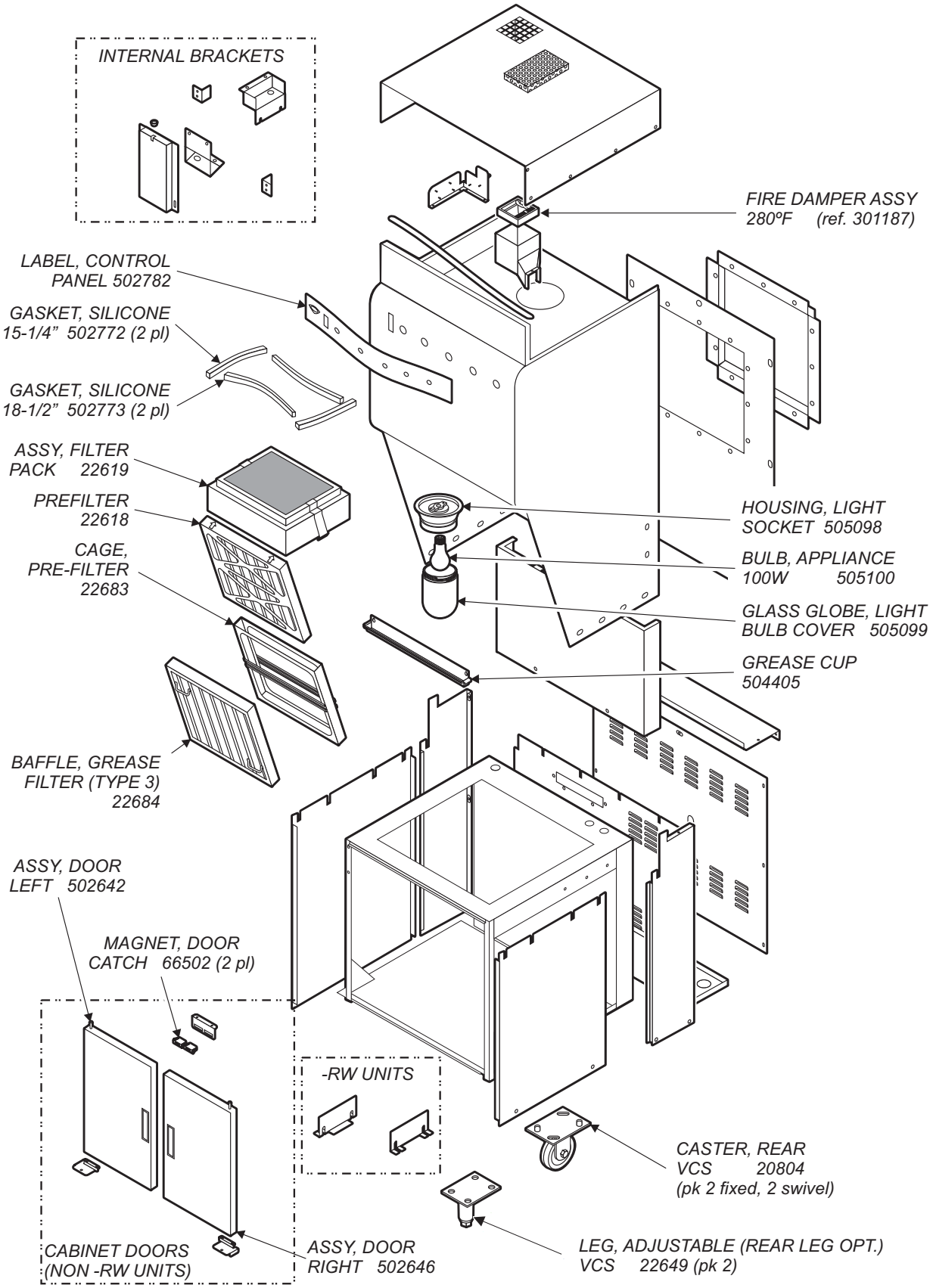


ANSUL© p/n 77284
DETAIL

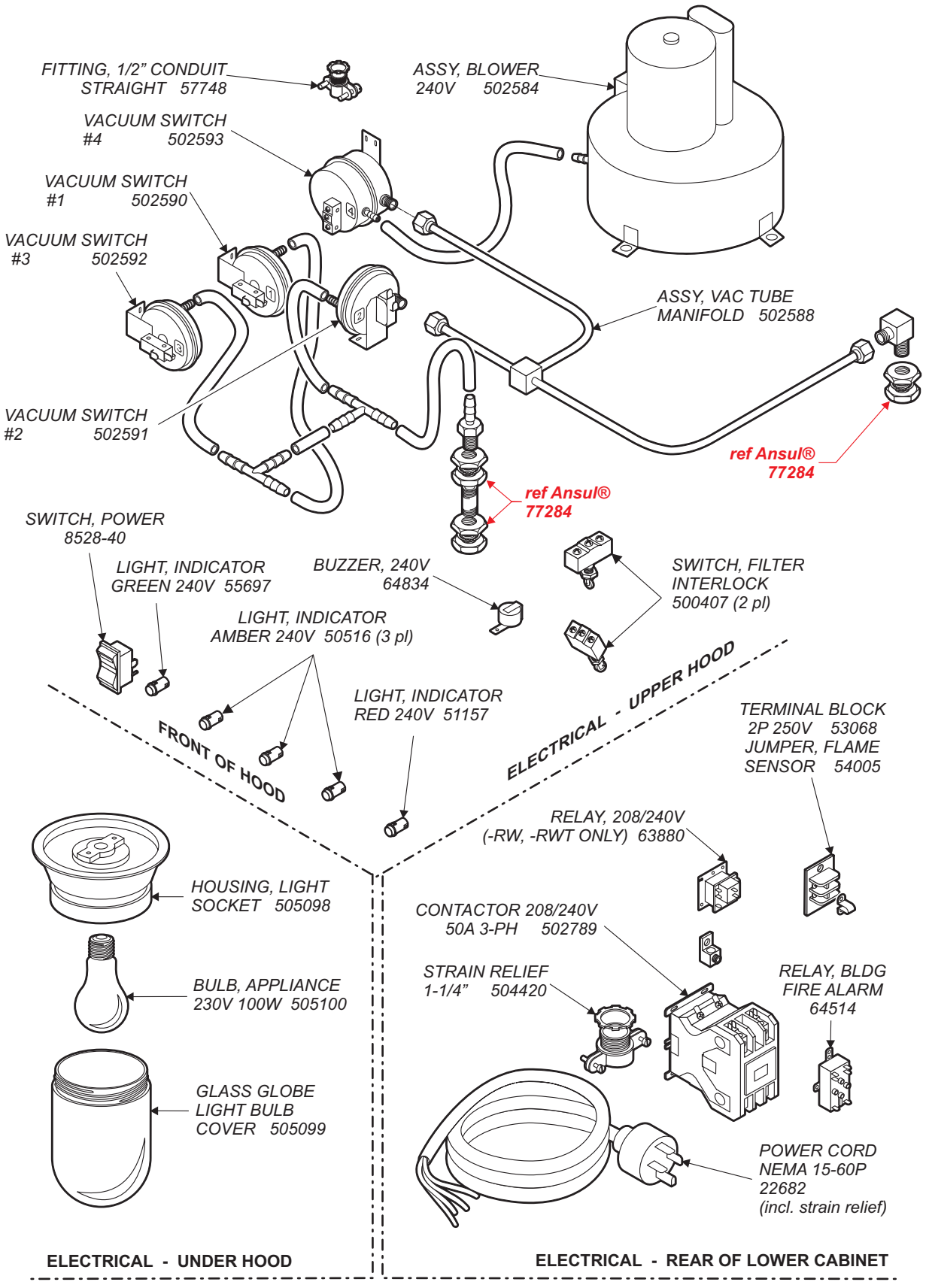


ANSUL© p/n 423250
DETAIL

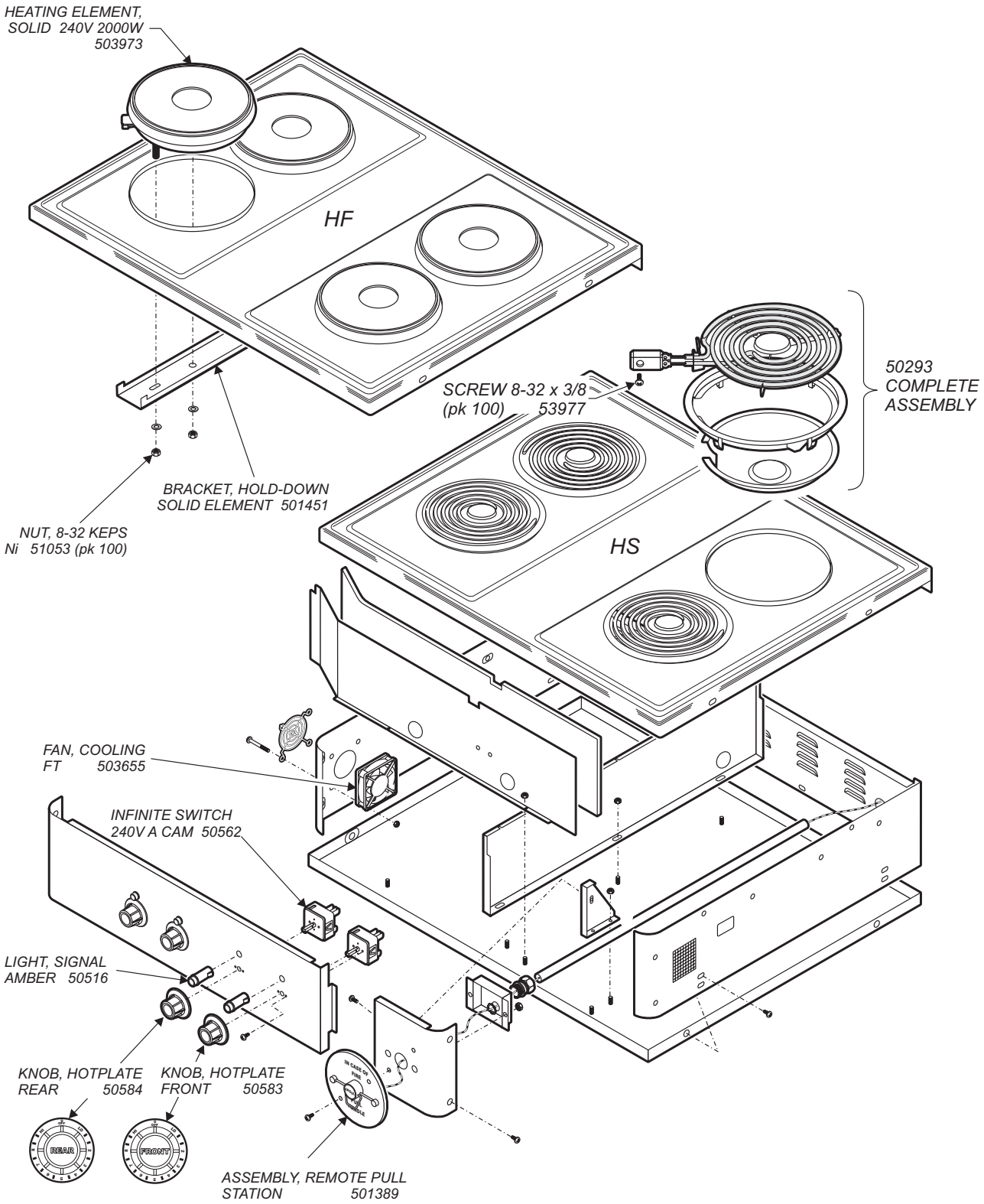
CABINET COMPONENTS



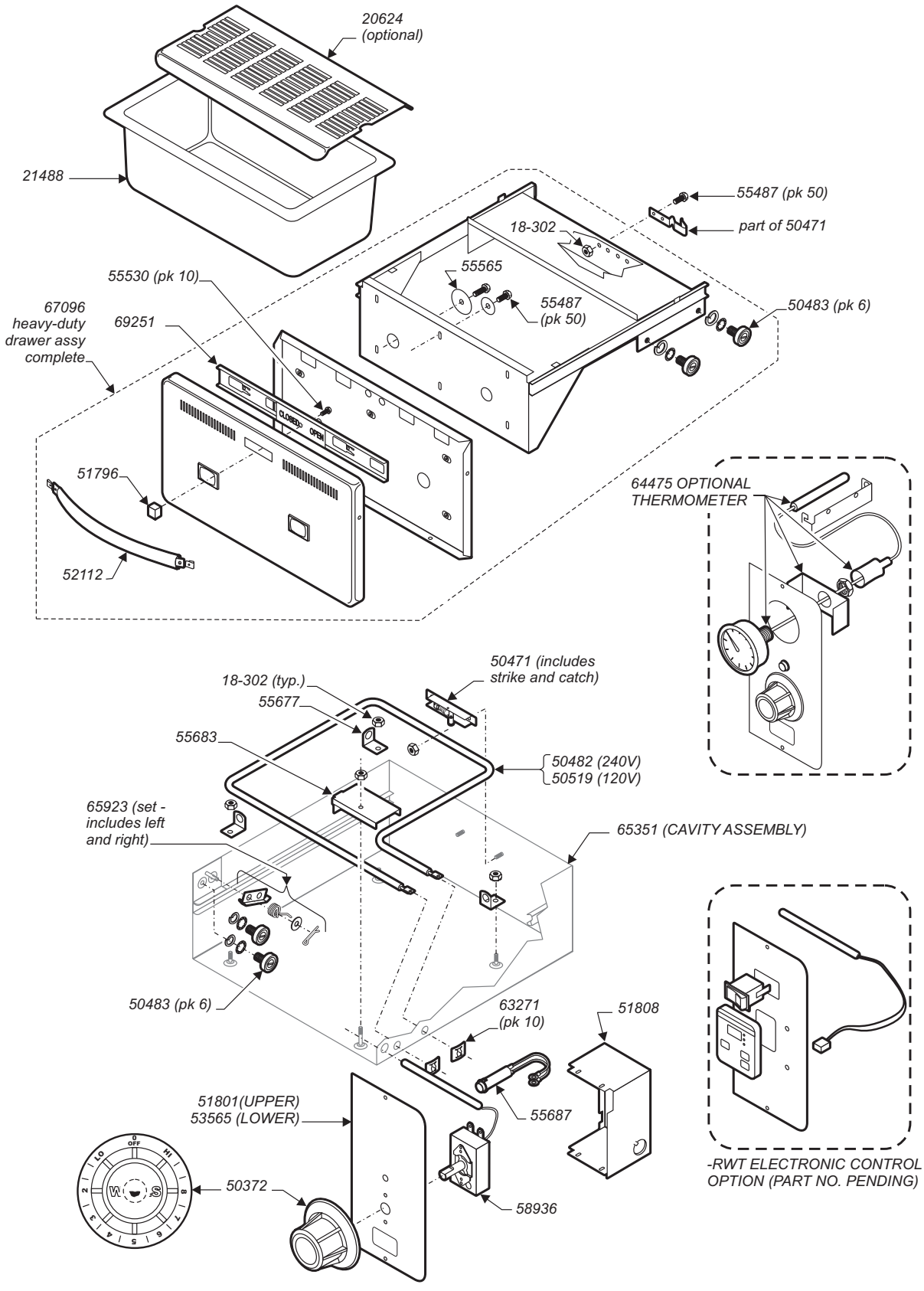
HOOD ELECTRICAL & VACUUM COMPONENTS


FITTING, 1/2" CONDUIT STRAIGHT 57748
ASSY, BLOWER 240V 502584
VACUUM SWITCH #4 502593
VACUUM SWITCH #1 502590
VACUUM SWITCH #3 502592
ASSY, VAC TUBE MANIFOLD 502588
VACUUM SWITCH #2 502591
ref Ansul® 77284
ref Ansul® 77284
SWITCH, POWER 8528-40
LIGHT, INDICATOR GREEN 240V 55697
BUZZER, 240V 64834
SWITCH, FILTER INTERLOCK 500407 (2 pl)
LIGHT, INDICATOR AMBER 240V 50516 (3 pl)
LIGHT, INDICATOR RED 240V 51157
FRONT OF HOOD
ELECTRICAL - UPPER HOOD
TERMINAL BLOCK 2P 250V 53068
JUMPER, FLAME SENSOR 54005
RELAY, 208/240V (-RW, -RWT ONLY) 63880
HOUSING, LIGHT SOCKET 505098
CONTACTOR 208/240V 50A 3-PH 502789
STRAIN RELIEF 1-1/4" 504420
RELAY, BLDG FIRE ALARM 64514
BULB, APPLIANCE 230V 100W 505100
GLASS GLOBE LIGHT BULB COVER 505099
POWER CORD NEMA 15-60P 22682 (incl. strain relief)
ELECTRICAL - UNDER HOOD
ELECTRICAL - REAR OF LOWER CABINET

COOKTOP

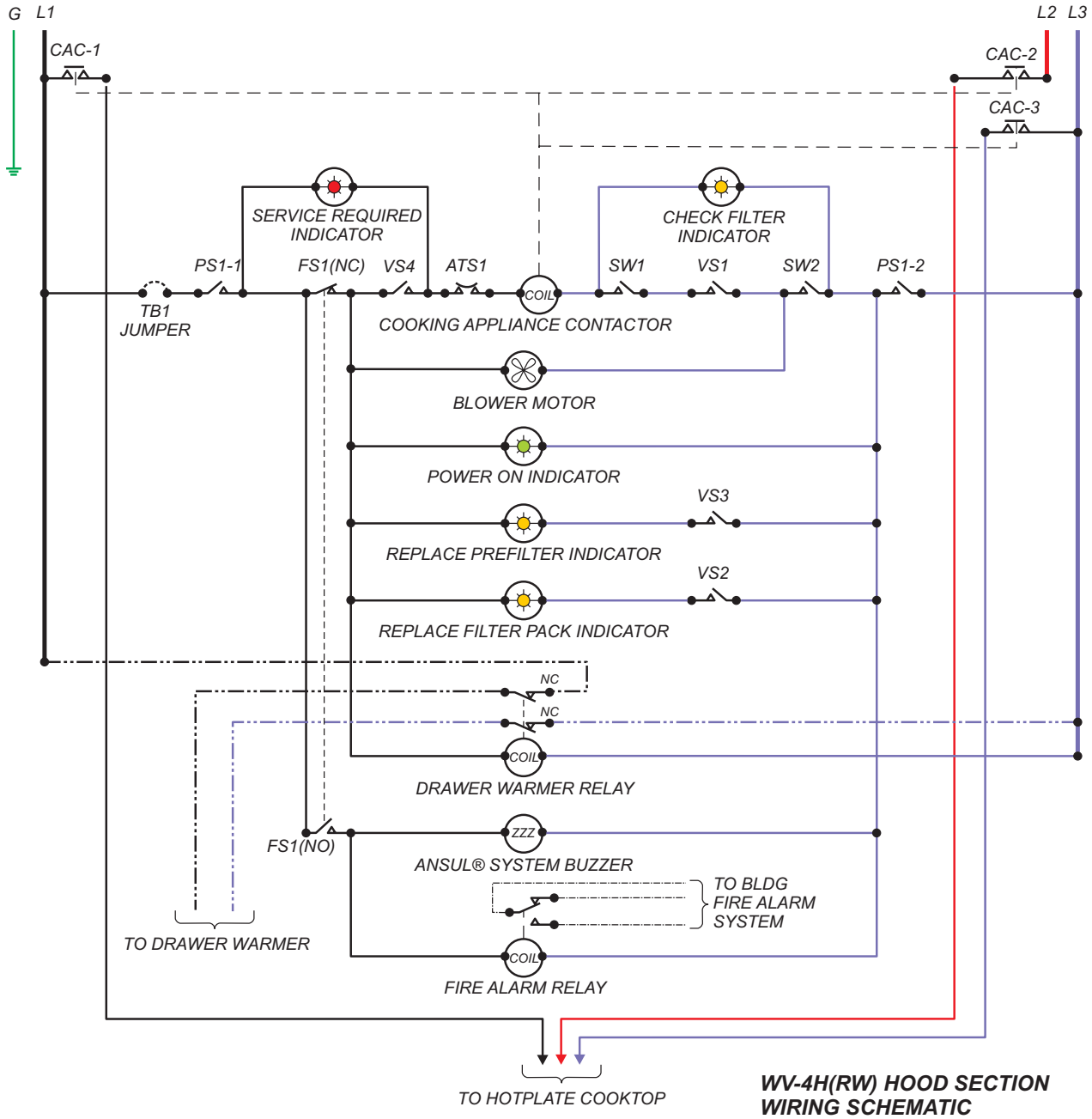

HEATING ELEMENT, SOLID 240V 2000W 503973
HF
SCREW 8-32 x 3/8 (pk 100) 53977
50293 COMPLETE ASSEMBLY
BRACKET, HOLD-DOWN SOLID ELEMENT 501451
NUT, 8-32 KEPS Ni 51053 (pk 100)
HS
FAN, COOLING FT 503655
INFINITE SWITCH 240V A CAM 50562
LIGHT, SIGNAL AMBER 50516
KNOB, HOTPLATE REAR 50584
KNOB, HOTPLATE FRONT 50583
REAR
FRONT
ASSEMBLY, REMOTE PULL STATION 501389

DRAWER WARMER



WIRING SCHEMATIC

HOOD SECTION

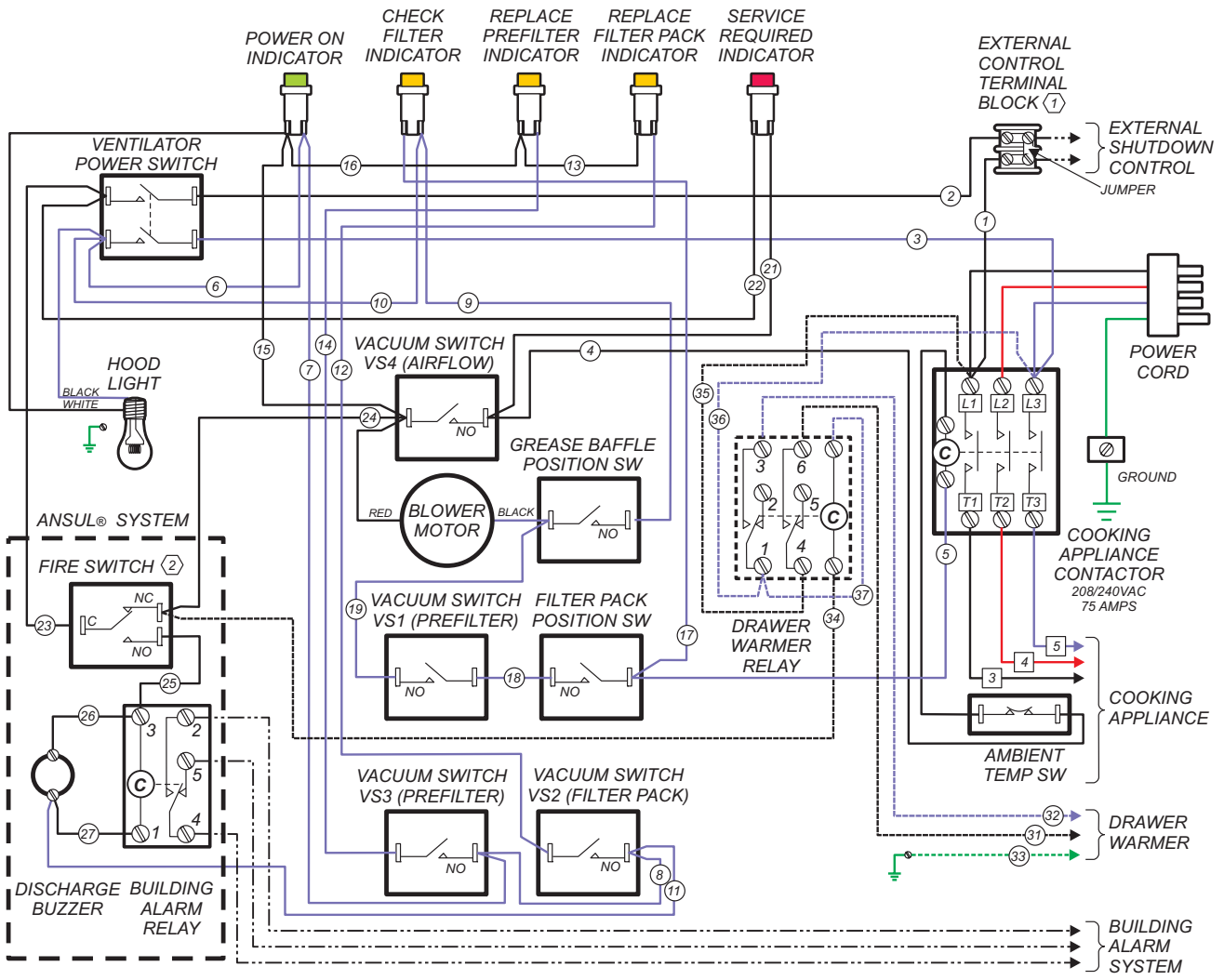


WV-4H(RW) HOOD SECTION WIRING SCHEMATIC

LEGEND

ATS1 = AMBIENT TEMPERATURE SWITCH
CAC = COOKING APPLIANCE CONTACTOR
FS1 = ANSUL® FIRE ALARM SWITCH
PS1 = POWER SWITCH
SW1 = FILTER PACK POSITION SWITCH
SW2 = GREASE BAFFLE POSITION SWITCH
VS1 = PRE-FILTER POSITION VAC SWITCH
VS2 = REPLACE FILTER PACK VAC SWITCH
VS3 = REPLACE PRE-FILTER VAC SWITCH
VS4 = AIRFLOW MONITOR VAC SWITCH

HOOD SECTION



NOTES

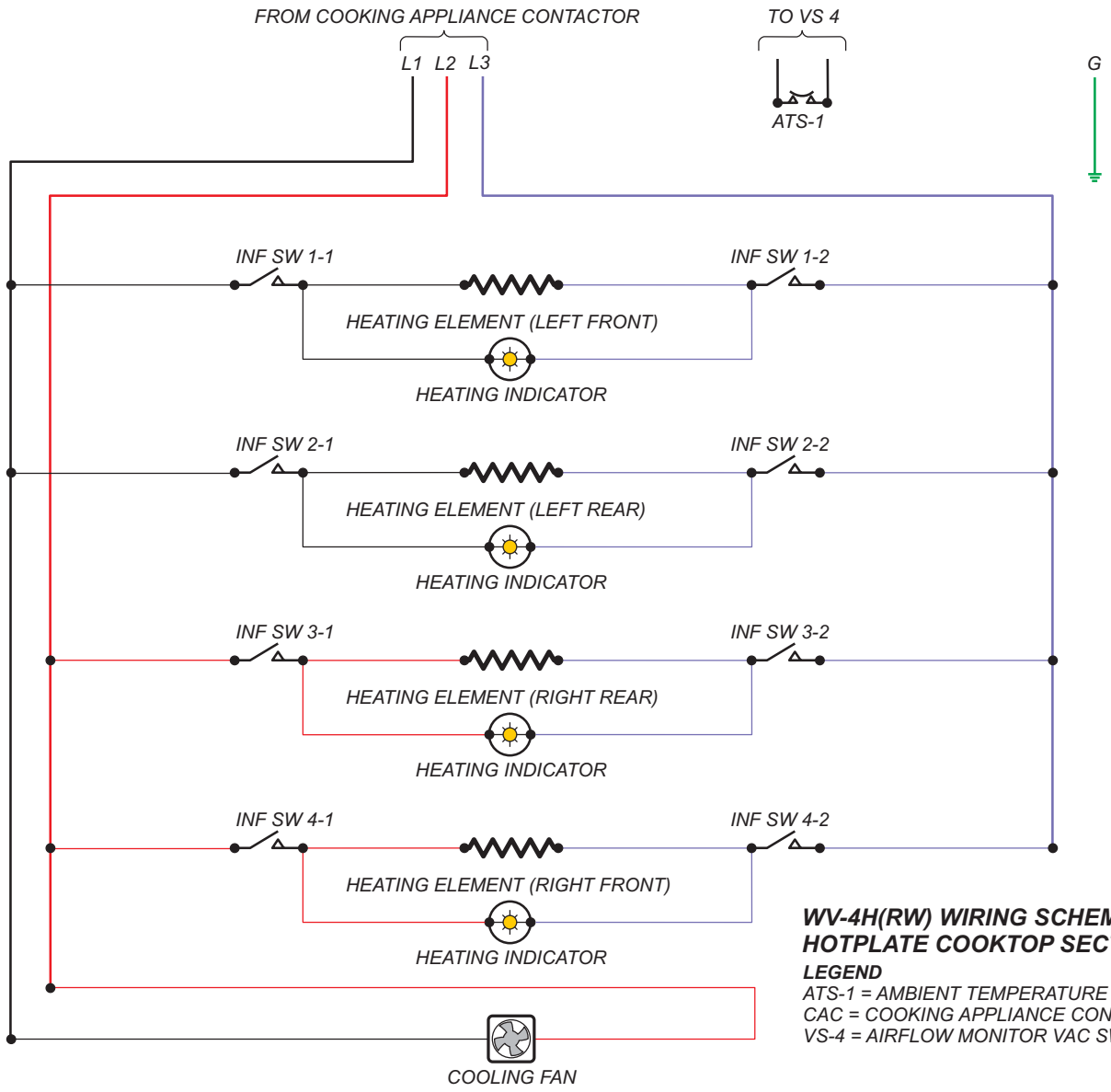
1. *REMOVE JUMPER WHEN USING EXTERNAL CONTROL.*
   IMPORTANT:
   DO NOT CONNECT ANY POWER TO EXTERNAL CONTROL TERMINAL BLOCK!
2. *FIRE SWITCH SHOWN WITH ANSUL® SYSTEM CHARGED AND COCKED*

MODEL	VOLTS 60Hz	3ø AMPS			1ø AMPS	WATTS
		L1	L2	L3		
WV- 4HF	208V	16	15	26	30	6,300
	240V	18	17	30	35	8,300
WV-4HFRW WV-4HFRWT	208V	19	15	30	34	7,000
	240V	27	22	43	48	11,600
WV-4HS	208V	20	19	34	39	8,100
	240V	23	22	39	45	10,700
WV-4HSRW WV-4HSRWT	208V	19	15	30	34	7,000
	240V	22	17	34	38	9,200

from p/n 302802 issue J

WIRING SCHEMATIC

HOTPLATE COOKTOP SECTION

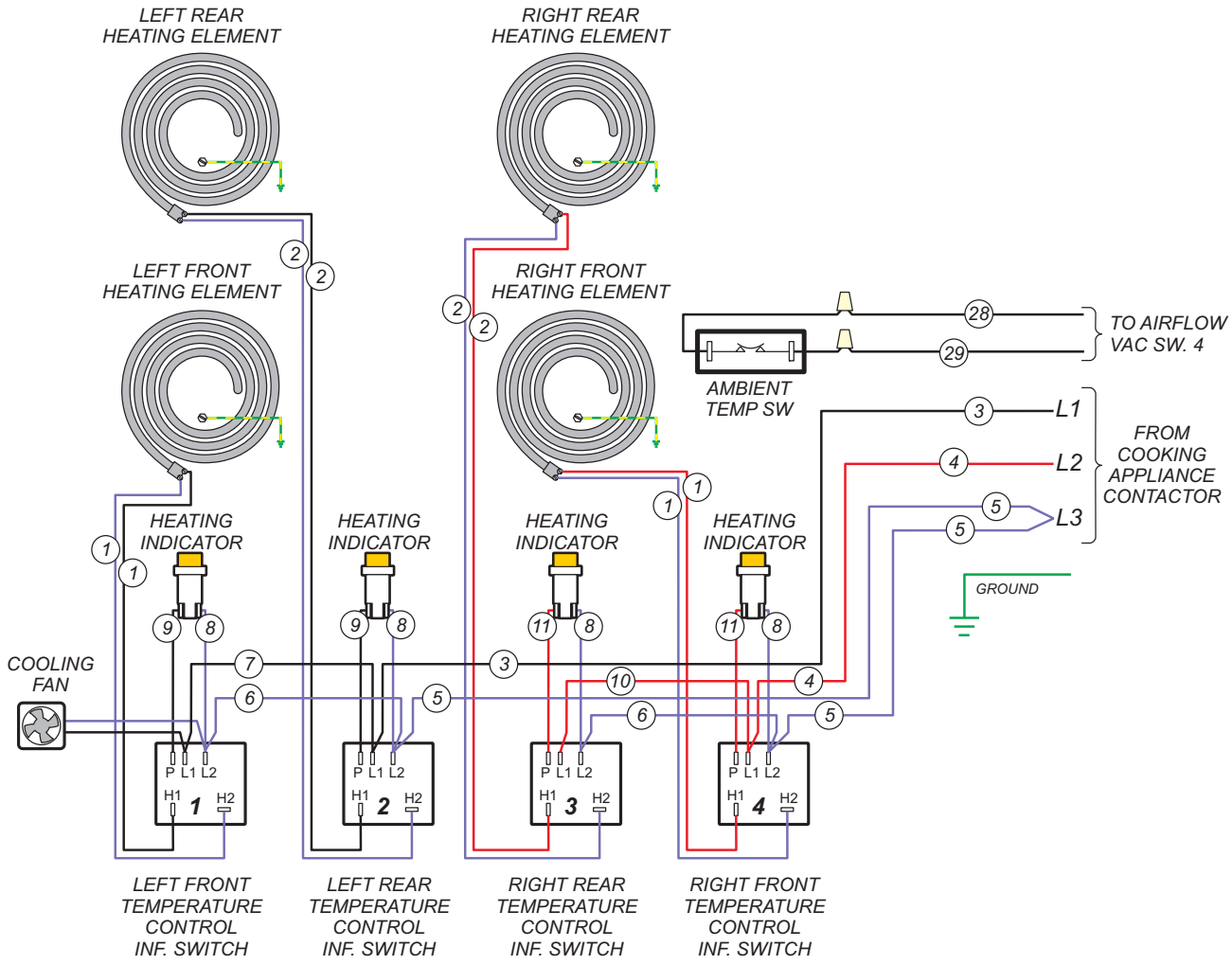


WV-4H(RW) WIRING SCHEMATIC
HOTPLATE COOKTOP SECTION

LEGEND

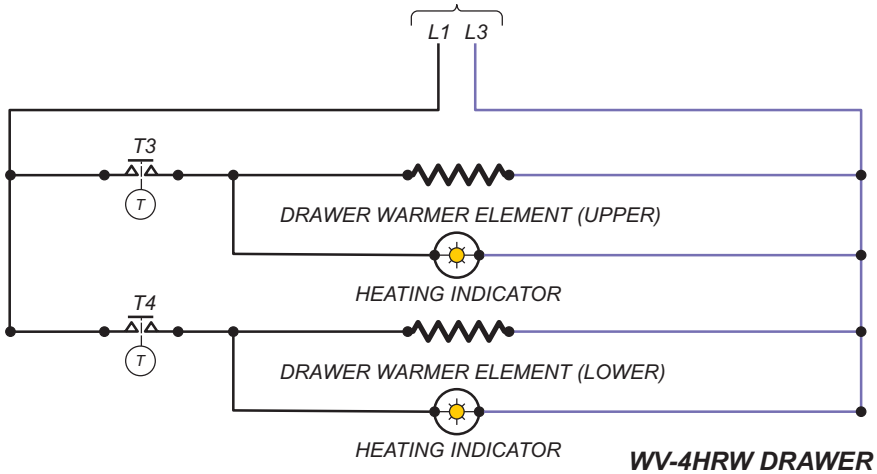
ATS-1 = AMBIENT TEMPERATURE SWITCH
CAC = COOKING APPLIANCE CONTACTOR
VS-4 = AIRFLOW MONITOR VAC SWITCH

HOTPLATE COOKTOP SECTION



WIRING SCHEMATIC

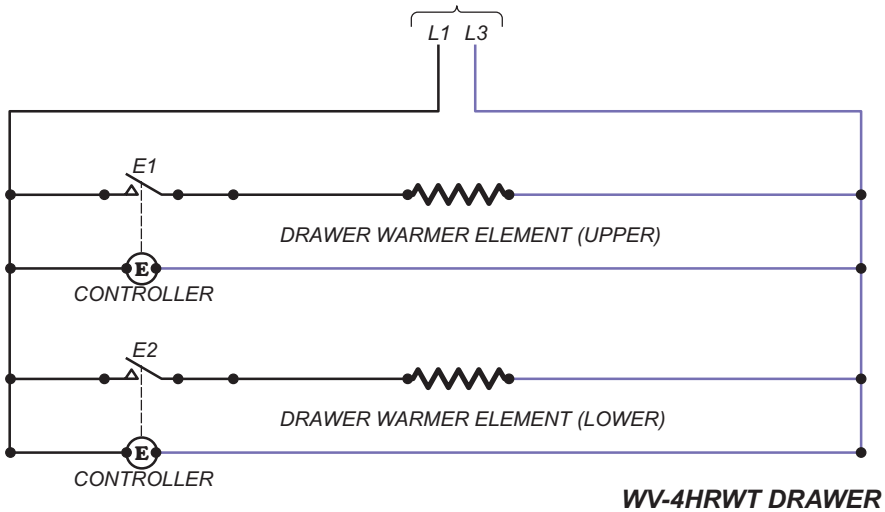
DRAWER WARMER SECTION (RW-STYLE)



WV-4HRW DRAWER WARMER SECTION WIRING SCHEMATIC

LEGEND
T3, T4 = DRAWER WARMER THERMOSTAT

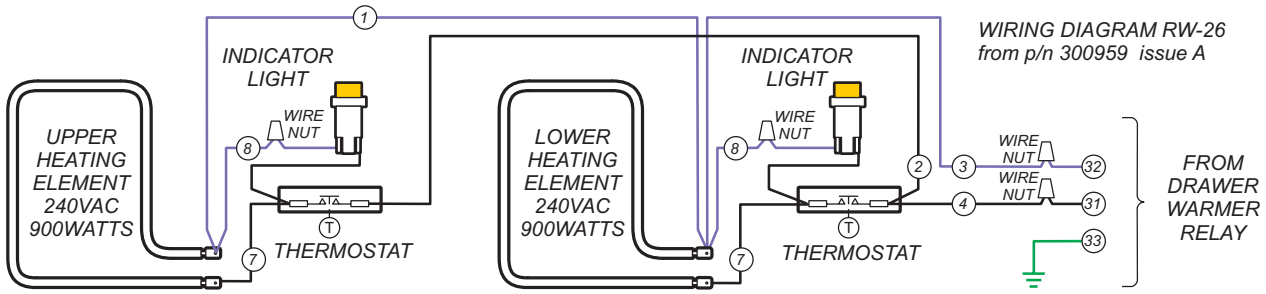
DRAWER WARMER SECTION (RWT-STYLE)



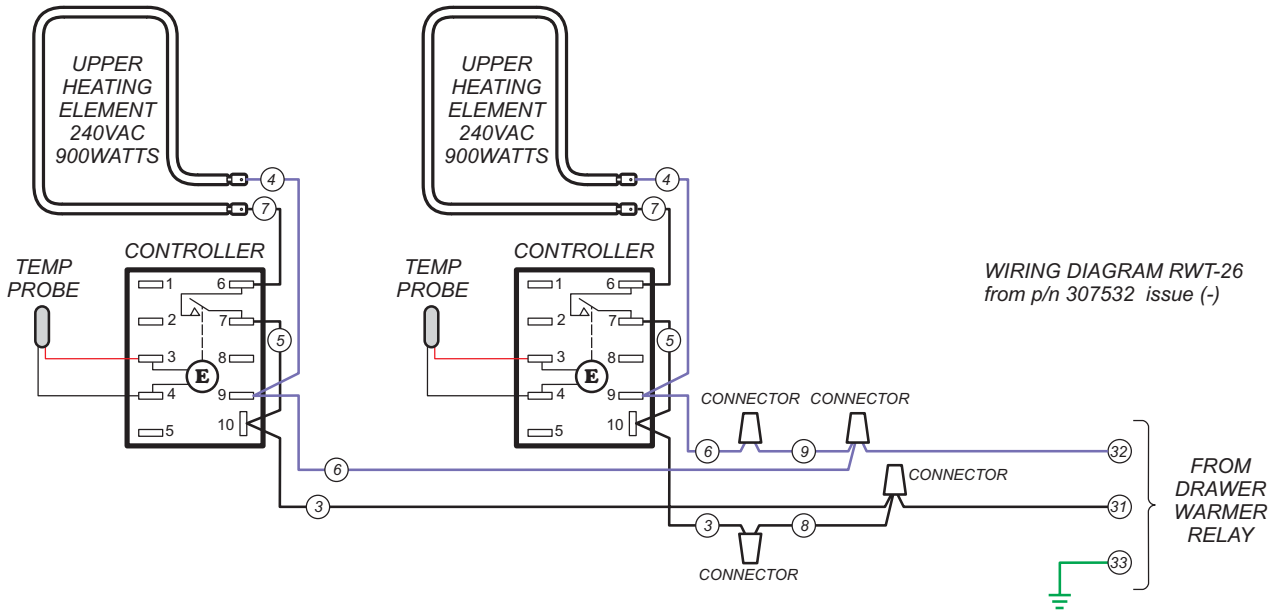
WV-4HRWT DRAWER WARMER SECTION WIRING SCHEMATIC

LEGEND
E1, E2 = DRAWER WARMER TEMPERATURE CONTROLLER N.O. CONTACTS

DRAWER WARMER SECTION (RW-STYLE)



DRAWER WARMER SECTION (RWT-STYLE)



MSDS - ANSULEX™ Low pH FIRE SUPPRESSION MEDIA

ANSUL® ANSUL INCORPORATED
MARINETTE, WI 54143-2542

MATERIAL SAFETY DATA SHEET

ANSULEX Low pH
QUICK IDENTIFIER (In Plant Common Name)

Manufacturer's Name:	**ANSUL INCORPORATED**	Emergency Telephone No.:	**CHEMTREC (800) 424-9300 or (703) 527-3887**
Address:	One Stanton Street, Marinette, WI 54143-2542	Other Information Calls:	(715) 735-7411
Prepared By:	Safety and Health Department	Date Prepared:	February 1, 1999

SECTION 1 - IDENTITY

Common Name (Used on Label): (Trade Name and Synonyms)	ANSULEX Low pH Liquid Fire Suppressant	CAS No.:	N/A
Chemical Name:	N/A This is a Mixture	Chemical Family:	Mixture
Formula:	N/A		

SECTION 2 - INGREDIENTS

PART A - HAZARDOUS INGREDIENTS

Principal Hazardous Component(s) (chemical and common name(s)):	Wt.%	CAS No.	ACGIH TLV	Acute Toxicity Data
None	N/A	N/A	N/A	N/A

PART B - OTHER INGREDIENTS

Other Component(s) (chemical and common name(s)):	Wt.%	CAS No.	ACGIH TLV	Acute Toxicity Data
Proprietary Mixture of Organic and Inorganic Salts	48.0 - 50.0	N/A	N/E	NDA
Phosphoric Acid	0.2	7664-38-2	N/E	NDA
EDTA	0.65	64--02-8	N/E	NDA
Yellow-Green Fluorescent Dye	0.011	518-47-8	N/E	Oral LD_{50}(rat) 6800 mg/kg
Water	Approx. 50.0	7732-18-5	N/E	NDA

SECTION 3 - PHYSICAL AND CHEMICAL CHARACTERISTICS (Fire and Explosion Data)

Boiling Point:	113ºC			Specific Gravity (H_2O=1):	1.33	Vapor Pressure (mm Hg):	Not Determined
Percent Volatile by Volume (%):	Approx. 50.0	Vapor Density: (Air = 1):	1.03	Evaporation Rate: (Butyl Acetate=1):	Approx. 0.005		
Solubility in Water:	100%			Reactivity in Water:	Mild exothermic reaction		
Appearance and Odor:	Fluorescent Yellow Colored Liquid, Mild Odor						
Flash Point:	None to boiling	Flammable Limits in Air % by Volume:	N/A	Extinguisher Media:	N/A	Auto-Ignition Temperature:	N/A
Special Fire Fighting Procedures:	NONE - THIS IS AN EXTINGUISHING AGENT						
Unusual Fire and Explosion Hazards:	None						

SECTION 4 - PHYSICAL HAZARDS

Stability:	Unstable ☐ Stable ☒	Conditions to Avoid:	N/A
Incompatibility (Materials to Avoid):	Reactive Metals, ClF_3, electrically energized equipment, any material reactive with water.		
Hazardous Decomposition Products:	Not established, acrid fumes.		
Hazardous Polymerization:	May Occur ☐ Will Not Occur ☒	Conditions to Avoid:	N/A

SECTION 5 - HEALTH HAZARDS

ANSULEX Low pH (continued)

Threshold Limit Value:	None Established
Routes of Entry: Eye Contact:	Irritant
Skin Contact:	Irritant
Inhalation:	Not an expected route of entry. Can be irritating to mucous membranes.
Ingestion:	Irritating to mucous membranes. Acute Oral LD_{50} (Sprague-Dawley rats) 825.5mg/kg.
Signs and Symptoms:	Acute Exposure: Material irritates skin, eyes, and mucous membranes. Chronic Exposure: None known.
Medical Conditions Generally Aggravated by Exposure:	None known.
Chemical Listed as Carcinogen or Potential:	National Toxicology Program: Yes ☐ No ☒ I.A.R.C Monographs: Yes ☐ No ☒ OSHA Yes ☐ No ☒

SECTION 6 - EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Flush and irrigate with water for 15 minutes while holding eyelids open. If irritation persists, seek medical attention.
Skin Contact:	Wash thoroughly with soap and water. If irritation persists, seek medical attention.
Inhalation:	Fresh air if symptoms occur. If irritation persists, seek medical attention.
Ingestion:	Dilute by drinking large quantities of water.

SECTION 7 - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):	N/A		
Ventilation:	Local Exhaust: N/A	Mechanical (General):	N/A
Protective Gloves:	Rubber gloves for spill/leak	Eye Protection:	Chemical goggles recommended during spill/leak procedures.
Other Protective Clothing or Equipment:	Eye wash and safety showers are good safety practice.		

SECTION 8 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be taken in Handling and Storage:	Store in original container. Keep tightly closed. Keep separate from acid.
Other Precautions:	See incompatibility information in Section 4.
Steps to be taken in Case Material is Released or Spilled:	Stop leaks. Contain spills. Remove as much as possible. Place in closed container for proper disposal Wash spill area with large amounts of water to remove traces and neutralize.
Waste Disposal Methods:	Dispose of in compliance with local, state and federal regulations.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HAZARD INDEX

4 SEVERE HAZARD	0 HEALTH
3 SERIOUS HAZARD	
2 MODERATE HAZARD	0 FLAMMABILITY
1 SLIGHT HAZARD	
0 MINIMAL HAZARD	0 REACTIVITY

N/A = Not Applicable NDA = No Data Available N/E = Not Established

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WELLS BLOOMFIELD, LLC

VENTILATOR HOOD OWNERS MONTHLY INSPECTION LOG

Inspection shall be conducted on a monthly basis in accordance with the manufacturer's Operation Manual. At a minimum, this inspection shall include verification of the following:

OPERATION	AGENT / DATE											
Extinguishing system components: In proper place and (visually) in good order												
Manual pull station actuators for fire suppression system are unobstructed												
The maintenance log is in place and up to date												
No obvious physical damage or condition exists that might prevent operation of the fire suppression system												
The nozzle blow-off caps are in place and in good condition												
The hood, duct and protected cooking appliance have not been replaced, modified or relocated												
Clean plenum GREASE BAFFLE and BLOWER (max. interval: 3 months)												
Change PRE-FILTER and FILTER PACK (as required)												

This MAINTENANCE LOG is to be performed and completed by a trained technician who has completed the instruction necessary to perform the maintenance and recharge service.

WELLS BLOOMFIELD, LLC
VENTILATOR HOOD MAINTENANCE LOG

OPERATION		AGENT / DATE									
Clean and inspect discharge nozzle in plenum BEFORE filters Max. interval: 6 months											
Clean and inspect discharge nozzle in plenum AFTER filters Max. interval: 6 months											
Inspect fire suppression fuse links, all releasing devices for actuation, fire suppressant tank liquid level Max interval: 6 months (discharge of fire suppressant not a part of this test)											
Inspect fire suppression hoses, plumbing and tank for obstructions and any conditions such as, but not limited to, corrosion and pitting. Max. interval: 6 months											
Inspect and test all filter interlocks Max. interval: 6 months											
Replace two (2) fire suppression links located in plenum: each link is rated @ 212ºF Max interval: 12 months	Log TEMP										
	Log Mfg DATE Stamp										
Replace fire damper fusible link: rated @ 280ºF Max interval: 12 months	Log TEMP										
	Log Mfg DATE Stamp										

THIS MAINTENANCE LOG MUST BE KEPT IN A PROTECTIVE COVER PERMANENTLY ATTACHED TO THE APPLIANCE
Log all repairs and recommendations on reverse side. Any repairs, other than replacement of factory authorized parts, to the fire suppression plumbing system must be subject to hydrostatic pressure testing.

IMPORTANT: WELLS BLOOMFIELD, LLC PROPRIETARY INFORMATION.
DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN
WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED.
TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR
USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.

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Wells Bloomfield proudly supports CFESA
Commercial Food Equipment Service Association

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